# COMPUTERWORLD

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## Attendees Pan Reborn Comdex

### Big vendors absent; users say show needs to do more to restore its relevance to corporate IT

**BY TODD R. WEISS**
LAS VEGAS

The promise was for a smaller, more IT-focused Comdex this year, with less emphasis on gadgets and glitz.

But on the show floor at the Las Vegas Convention Center last week, the verdict from many attendees was that the show's organizer, MediaLive International Inc.,

still has a long way to go to restore Comdex's relevance to corporate IT.

A core problem cited by many attendees was the number of large IT vendors that were conspicuous for their absence. Aside from Microsoft Corp., Dell Inc., Computer Associates International Inc. and Siebel Systems

*Comdex, page 49*

> **INSIDE**
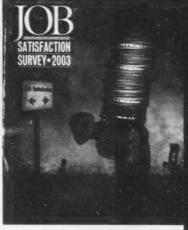> Disappointment reigns at crosstown CD Expo. PAGE 49
>
> Comdex showed that vendors are no longer calling the shots, says Marytran Johnson. PAGE 2C

## After a Year, Tablet Still Niche

### Adoption may get jump-start with pen OS upgrade next year

**BY BOB BREWIN**
A year after its introduction, Microsoft Corp.'s Tablet PC technology remains a niche product, according to analysts and hardware vendors. But the company hopes user adoption rates will rise when an upgrade of the pen-based operating system hits the market.

The updated software, formally known as Windows XP Tablet PC Edition 2004, is due to ship by the end of June. Bill

Gates, Microsoft's chairman and chief software architect, said in his Comdex/Fall 2003 keynote speech that the upgrade should make it easier for developers to add so-called digital ink capabilities to new and existing applications.

Some corporate users are already making big investments in tablet devices. For example, HealthSouth Corp., a Birmingham, Ala.-based company that provides outpatient surgery and other health care services, this month said it had ordered 5,000 tablet PCs equipped with wireless LAN

*Tablet PCs, page 14*

# WHAT'S Wrong HERE?

## My employer is successful at building employee loyalty:

- Agree **26%**
- Disagree **50%**
- Neutral **22%**
- Don't know: 2%

**BASE:** 936 respondents

**THIS YEAR'S JOB SATISFACTION SURVEY** shows that budget cuts, huge workloads, staff layoffs, training cuts and salary freezes have created an IT workforce that's more vocal about its frustrations. More than half of the IT workers polled said they're less satisfied with their jobs than they were a year ago. Find out what else they're saying about their careers. **STORIES BEGIN ON PAGE 35.**

## JOB SATISFACTION SURVEY • 2003

> **ONLINE EXCLUSIVE**
> For complete results of the survey, visit QuickLink a3810

## IBM Pushes New Bank Apps

### Eyes J2EE to replace Cobol core systems, but costs deter users

**BY LUCAS MEARIAN**
In its second such deal since late October, IBM last week said it plans to work with a banking software vendor in India to develop J2EE-based applications that will be pitched as a replacement for banks' aging core processing systems.

The software that will result from the joint development pacts will run on IBM's servers and use its WebSphere middleware technology and

DB2 databases. Together, the two deals signal the start of a bid by IBM and its partners to persuade banks to move away from applications built on Cobol and the spaghetti code of other decades-old programming languages.

But it may not be an easy

sell. Most major banks remain extremely reluctant to invest the $100 million or more it's estimated to cost to replace their Cobol-based mainframe applications with more modern systems, analysts said.

Sadru Teja, vice president of IT architecture at Royal Bank of Canada in Toronto, said that for now the company has

*Bank Apps, page 16*

### IBM'S SOFTWARE PARTNERS

| Fidelity National | i-Flex Solutions |
|---|---|
| ■ Will tailor its new software for retail banks. | ■ Is initially developing a J2EE-based version of its retail banking software. |
| ■ Plans to support the full J2EE specification. | ■ Will add other application modules to the J2EE-based offering in the future. |
| ■ Is porting the applications to IBM's zSeries, pSeries and xSeries servers. | ■ Plans to support IBM's full line of servers. |

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**In this week's Technology section:** Incentive pay is one way to motivate and retain employees. Enterprise incentive management software can help make those benefits possible or make bigger pieces of the pie available to more people. **Page 23**

## Apps Under Wraps

**Also in this week's Technology section:** Application-packaging tools deliver consistency, eliminate conflicts and can cut support costs. But the tools aren't easy to master and won't succeed without strict desktop management policies. **Page 30**

## ONLINE

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**RFID Privacy Scare Is Overblown**
OPINION: Jay Cline says the RFID community needs to counteract the public hysteria about possible privacy abuses. ◐ QuickLink 42929

**Best Practices for Wireless Network Security**
MOBILE/WIRELESS: A university IT audit manager explains how to mitigate eight major wireless LAN security risks. ◐ QuickLink 42642

**Disaster Planning Never Ends**
DISASTER RECOVERY: Two years after embarking on an effort to build a bulletproof system, Mesaba, the fifth-largest regional airline in the U.S., is still working on data protection. ◐ QuickLink a3820

**Optimize Your Web Site For the Holidays**
WEB SITE MANAGEMENT: Want online shoppers to find your business this holiday season? Tweak your site to be search-engine-friendly. ◐ QuickLink 42742

**Develop a More Effective Style**
CAREERS: Passed over for promotions? Poor people skills are often to blame. The good news is that you can improve your interpersonal skills and "emotional intelligence." Here's a step-by-step approach. ◐ QuickLink 42884

**What's a QuickLink?**
◐ Throughout each issue of *Computerworld*, you'll see five-digit QuickLink codes pointing to related content on our Web site. Also, at the end of each story, a QuickLink to that story online facilitates sharing it with colleagues. Just enter any of those codes into the QuickLink box, which is at the top of every page on our site.

## AT DEADLINE

### Sun Weighs New Open-Source Plan

Sun Microsystems Inc. said it's considering a plan to offer versions of its application and Web server software under open-source licenses. Jonathan Schwartz, Sun's executive vice president of software, said the idea is an outgrowth of an effort to promote use of the company's Java Desktop System technology in China (see story, page 7).

### J2EE 1.4 Upgrade Ready for Release

Sun said Version 1.4 of the Java 2 Enterprise Edition specification will become available today, along with a software development kit that includes a fully deployable version of its application server software. Sun is offering open-source license terms on J2EE 1.4 to nonprofit users and announced initial deals with The Apache Software Foundation and JBoss Group LLC.

### Novell Maps Plan For Mono Project

Novell Inc. detailed a road map for the Mono project, a community-based initiative to develop an open-source version of Microsoft Corp.'s .Net technology for Linux and Unix systems. An initial release is due by mid-2004.

Separately, Novell reported fiscal 2003 revenue of $1.1 billion and a net loss of $162 million. In 2002, Novell lost $247 million, also on revenue of $1.1 billion

### Pivotal Rejects New Buyout Bids

Pivotal Corp. in Vancouver, British Columbia, rejected new buyout bids by two companies and recommended that shareholders of the CRM software vendor approve an earlier plan to merge with Talisma Corp. in Kirkland, Wash. A shareholders meeting on the various acquisition proposals was scheduled to take place late last Friday.

# Software Failure Cited in Blackout Investigation

## Task force points to malfunction at FirstEnergy site

BY DAN VERTON

THE TASK FORCE investigating the cause of the August blackout that crippled much of the Northeast and parts of Canada concluded that a software failure at Akron, Ohio-based FirstEnergy Corp. "may have contributed significantly" to the outage.

The interim report of the U.S.-Canada Power System Outage Task Force, released last week, highlights the failure of various IT systems that thwarted utility workers' ability to contain the blackout. It found no evidence that malicious insiders or external saboteurs were responsible for the outage.

According to the task force, FirstEnergy's Alarm and Event Processing Routine, a software program that gives operators visual and audible indications of events occurring on their portion of the grid, began to malfunction. As a result, "key personnel may not have been aware of the need to take preventive measures at critical times," the report states.

In addition, "some companies appear to have had only a limited understanding of the status of the electric systems outside their immediate control," the report concludes. "This may have been, in part, the result of a failure to use modern dynamic mapping and data sharing systems."

In a statement released Nov. 19, FirstEnergy President and Chief Operating Officer Anthony J. Alexander said the company remains "convinced" that the blackout can't be traced to any one utility system. "We recognize that our computer system experienced problems that day," he said.

### MORE ONLINE

For more information on this topic, visit our Blackout 2003 Special Coverage page:
QuickLink a3550
www.computerworld.com

"After an extensive analysis, we submitted a report to the task force that identified a previously undetected flaw in vendor software that resulted in the loss of an alarm function, affecting our operators' understanding of events on our system."

However, "by focusing its analysis on a few selected events, the conclusions the task force reached don't address the complexity and magnitude of operations on the interconnected grid," he added.

Aside from the alarm software failure, the task force found that Internet links to Supervisory Control and Data Acquisition (SCADA) systems weren't properly secure. It also concluded that some operators lacked a system to view the status of electric systems outside their immediate control.

Of particular concern to the task force is the existence of direct and remote links between corporate networks used at utilities and the real-time SCADA systems used to manage the power grid. Until now, the electric industry has refused to publicly acknowledge these linkages and the vulnerability they pose. But the task force report puts SCADA system security at the center of the industry's most pressing security challenges.

"The existence of both internal and external links from SCADA systems to other systems introduced vulnerabilities," the report says. But it stops short of assigning blame for the blackout to a series of viruses and worms that hit the Internet prior to and during the outage. ◑ 43030

# Guidelines for HIPAA Compliance in the Works

BY JAIKUMAR VIJAYAN

Health care organizations looking for more information on how to comply with HIPAA security mandates may soon get more help.

URAC, a nonprofit accreditation agency for the health care industry, along with the Workgroup for Electronic Data Interchange and the National Institute of Standards and Technology, is developing guidelines for implementing HIPAA security policies.

The Healthcare Security Workgroup, which the three organizations created earlier this year, met in Washington last week to discuss how to consolidate industry best practices and security standards into a set of easily implemented instructions. The goal is to give organizations subject to the Health Insurance Portability and Accountability Act something they can use to ensure compliance with the law's security requirements by the April 15, 2005, deadline, said Adam Stone, a member of the workgroup. The group aims to deliver the guidelines by the middle of next year.

"No standard measures exist in the health care industry" to implement HIPAA's security requirements, Stone said. "One of the major problems with the rule is that it is so broad. There are a million different ways to approach it in terms of compliance."

The workgroup will study how it can adopt and adapt NIST's more general security specifications for federal information systems in the health care sector, said Lisa Gallagher, senior vice president of Washington-based URAC. Similarly, the workgroup will gather information on best practices, case studies and other standards efforts by organizations such as the Healthcare Information and Management Systems Society.

"We are going to gather all this information and make it available on a national basis," Gallagher said, by means of white papers and a portal site.

The community feedback that's being collected by the workgroup is also useful in adapting NIST standards for the health care industry, said Arnold Johnson, a NIST program manager in Washington.

"Real standards are very, very [much] needed," said Roger Brown, a senior IT auditor at Jefferson Health System, a $2 billion health care organization in Radnor, Pa. "Only the economically strong [companies] will comply with the intent of the law. Most will spend the absolute minimum they think they can get away with." Standards will provide a formal yardstick for measuring compliance, he said. ◑ 43028



**HIPAA HIPAA Hooray**

The Healthcare Security Workgroup's objectives are to:

■ **BRING TOGETHER** key stakeholders from the public and private sectors to facilitate communication and consensus on best practices for information security in health care.

■ **PROMOTE** the implementation of a uniform approach to security practices and assessments.

SOURCE: URAC, WASHINGTON

## FULL HIPAA COVERAGE

Read more about HIPAA on our Web site:
QuickLink s1500
www.computerworld.com

# China Embraces Linux Desktop, But Caution Prevails in the U.S.

## Sun gets first big win overseas, where open-source adoption has accelerated

BY PATRICK THIBODEAU

Sun Microsystems Inc. landed the largest Linux desktop deal in history with an agreement announced last week involving a consortium of technology providers in China.

But while Sun's China deal will raise the visibility of desktop Linux internationally, it isn't likely to speed U.S. adoption, said analysts and even users who have already made the switch.

"This is a trend, not a fad," said Scott Testa, chief operating officer at Mindbridge Inc., a Philadelphia-based intranet development company that has implemented a Linux desktop strategy. Although he's not expecting accelerated adoption in the U.S., "at the end of the day, there are working environments where Linux on the desktop makes a lot of sense," Testa said.

The deal calls for Sun to provide China Standard Software Co. with as many as 1 million seats per year of its Java Desktop System. China Standard Software is a consortium of Chinese technology companies that executes government initiatives.

Most large Linux client installations in the U.S., such as Cleveland-based paint manufacturer Sherwin-Williams Co.'s deployment of nearly 10,000 Linux-based IBM PCs [QuickLink 30082], have been for point-of-sale or operational support. They may compete with Microsoft Corp. offerings but aren't knowledge-worker desktops. Major Linux desktop announcements in the U.S. remain rare.

The company that supplied the Linux client systems to Sherwin Williams, Turbolinux Inc., has since shifted its attention to the Asia-Pacific region, where demand for Linux clients is strong. Though the company no longer markets its products here, it does maintain a U.S. presence.

Michael Jennings, director of business alliances and operations at Japan-based Turbolinux, said his company won the Sherwin-Williams deal in part by undercutting competitors in price. "It wasn't that great of a deal for us, other than getting our product out there," he said.

Linux desktop vendors, such as Xandros Inc. in New York, say U.S. businesses are interested and tell of hush-hush Linux desktop pilots in some very large companies that aren't ready to talk about their plans. "They are taking their time, which is fine," said Rick Bernstein, chairman of Xandros.

But it's a different story overseas. There is a worldwide, government-led push toward open-source systems. The European Union, India, Thailand, the Philippines, Vietnam and other countries are investigating open-source or have already adopted policies that embrace it.

Sun is moving aggressively internationally with what may be the most well-rounded Microsoft alternative for the desktop. Aside from its Java Desktop System, which includes the StarOffice productivity suite, Sun markets

StarOffice separately and bundles it with its Sun Ray thin client. According to Sun, StarOffice files are compatible with Microsoft Office files.

But despite the deal announced last week, China won't necessarily be an easy market for Sun.

Wuxi, China-based Evermore Software Co., for example, is selling a Java-based cross-platform office productivity product, EIOffice, to compete with Microsoft Office, StarOffice and others in China. Evermore President Gus Tsao claims the product is a true, integrated office suite that offers a single file format and one user interface for documents, spreadsheets and graphical applications. Evermore plans to launch the product in the U.S. in February at the Demo2004 conference in Scottsdale, Ariz.

In China, Evermore has hundreds of thousands of users, but the majority are using pirated copies. "In China, it's hard to sell software, because piracy is rampant everywhere," Tsao said. But the government, which is providing more than half of Evermore's backing, is beginning to crack down on piracy. ○ 43031

# Sun Outlines Plan to Offer Opteron-based Servers

## Says first models due early next year

BY PATRICK THIBODEAU

Sun Microsystems Inc. last week outlined plans to begin offering x86 servers running Advanced Micro Devices Inc.'s 64-bit Opteron processor, a move that may help put the chip on more radar screens in the coming year.

That will certainly be the case for Shane Brauner, systems administrator at the University of Houston's High Performance Computing Center, who said he's very interested in Opteron but believes application and compiler support from vendors "isn't really that great right now." For that reason, the center recently opted for systems running Intel Corp.'s 32-bit Xeon chips rather than Opteron, he said.

But Brauner said he believes that by the time Sun releases its first Opteron-based servers early next year, application support will have improved. He says the Opteron is an attractive alternative to 32-bit chips and Sun's more expensive Sparc RISC processors because of its ability to run both 64- and 32-bit applications written for Intel systems.

Sun announced at the Comdex trade show in Las Vegas last week that it had entered into a broad agreement with Sunnyvale, Calif.-based AMD to conduct joint sales and collaborate to optimize Solaris,

Java and development tools for the AMD chip. The companies said they plan to work with third-party application vendors on Opteron support.

"It's a broad and deep relationship," said Neil Knox, Sun's executive vice president of volume systems products. Sun officials said that the decision to offer Opteron wouldn't affect the company's investment in its Sparc processors and that Sun is committed to Sparc's ongoing improvement.

Sun forecasted the move last month when it said it would port Solaris to Opteron [QuickLink 42184]. It will also offer Linux on Opteron-based systems.

For Sun, which has seen flat revenue in recent quarters, offering Opteron-based Linux servers will help it participate in what is "a very vibrant sector of the server market," said Jean Bozman, an analyst at market research firm IDC.

IBM in August began offering Opteron-based systems but is focusing strictly on high-performance technical computing users, who are typically the early adopters of new technologies.

And that's currently where the demand is. One of AMD's largest Opteron users is Los Alamos National Laboratory, which announced in August that it had selected Opteron for two Linux clusters, one with 2,800 processors [QuickLink 40654]. Sun's plan is to extend Opteron to the mainstream computing market.

Sun said its Opteron pricing and server configuration plans aren't yet available.

Hewlett-Packard Co., which co-developed the 64-bit Itanium chip with Intel, has no plans to offer Opteron.

Nashua, N.H.-based Illuminata Inc. analyst Gordon Haff said he believes that Sun's move gives it a strong x86 offering in the small-to-midrange server market without hurting its high-end Sparc business. "They are committed to their high-end system," said Haff. "I don't see any reason to believe that Sun would move away from Sparc anytime soon." ○ 43032

### WHAT MANAGEMENT SAYS

Top Sun and AMD execs discuss the deal:

○ QuickLink 42905
www.computerworld.com

## BRIEFS

### European Panel Probes Oracle Bid

The European Commission said it has begun an in-depth evaluation of Oracle Corp.'s hostile takeover bid for PeopleSoft Inc. after an initial probe showed that the proposed combination "merits further analysis." The commission expects to spend four months looking at the potential impact of a takeover on competition in the business applications market.

### PeopleSoft Extends User Refund Offer

In other news related to Oracle's takeover bid, PeopleSoft said it has extended through Dec. 31 a program under which it's promising to pay users up to five times the cost of new software licenses if an acquisition takes place and the products they buy are discontinued. Oracle has asked a Delaware court to invalidate the so-called customer assurance program [QuickLink 42845].

### Sun Buys Maker Of Identity Tools

Sun Microsystems Inc. said it plans to buy Waveset Technologies Inc., an Austin-based vendor of identity management software, for an undisclosed amount of cash. Sun, which expects to complete the deal next month, will integrate Waveset's tools with its own Java System Network Identity Services offering.

### Short Takes

WORLDCOM INC., which now does business as MCI, said it has signed a network services deal with the state of Virginia that has a potential value of $250 million over 10 years. . . . 3COM CORP. and HUAWEI TECHNOLOGIES CO. launched a Hong Kong-based networking joint venture after receiving approval from China's government. . . . The U.S. POSTAL SERVICE is dropping an online bill-paying service operated by Norcross, Ga.-based CHECKFREE CORP.

MARK HALL ▪ ON THE MARK

# CA Ties Windows, Linux Into On-Demand . . .

. . . computing this week with its release of the beta version of Unicenter NSM Dynamic Reconfiguration Option. Next month the company will release its first product for on-demand operations that **lets IT managers set policies for allocating resources inside Solaris** systems. Unicenter sets policies that are implemented by Palo Alto, Calif.-based VMware Inc.'s virtual partitioning software [QuickLink 39965]. According to Gail Persil, director of computer management for Unicenter at Computer Associates, technical limits today restrict on-demand to one

computer — generally **a big, honkin' multiprocessor system, running gobs of memory** parceled out to shared applications. Although certainly a big part of the Solaris universe, systems like that aren't exactly the orbs around which the Windows and Linux planets revolve; they usually run a single app on a single box. To apply on-demand principles and, in the case of Unicenter, policies to these distributed machines, you need to be able to push workloads as well as policies back and forth across the network. Persil suggests that this will be real in about a year, with a possible demo at the next Comdex. Of course, if the show's attendance continues its downward trend, that will mean two journalists, 15 security guards and **a wayward gambler or two will be the only ones around to witness it.** ▪ Vendors in nearly empty Comdex booths were just the ticket

for Gary Miliefsky, CEO of Predator-Watch Inc. in North Chelmsford, Mass. He **went to Las Vegas in search of OEMs** for his vulnerability assessment tool, Auditor. Potential vendor partners had plenty of free time to hear his pitch. But you don't have to wait for him to make a deal to get your hands on the $4,995 appliance. You can get the device with the latest software, Version 2.1, this Friday. **Auditor can detect thousands of security, governance and privacy vulnerabilities,** including ones affecting HIPAA and Sarbanes-Oxley compliance, for up to 32 IP addresses, PredatorWatch claims. ▪ The Eclipse open-source developer framework, now in Version 2.1.2, is scheduled to have its 3.0 release in June. Expect to see changes in the user interface so it can more effectively handle the hundreds of plug-ins developers are using, and you won't have

to reboot every time you add one. The Java tools will also be improved. Those promised changes please IBM's John Wiegand, technical lead for Eclipse. **But what's making him positively giddy** is that users are taking the framework into an area he never dreamed of. "People want to build their applications on top of Eclipse," he says. That means the open-source code won't just be a nifty development platform — it can be the runtime engine for corporate applications. ▪ When your Windows systems get hit by a virus or just start acting strangely, you often want to step back in time to when things were running better. But **who wants to restore a system from backup tapes,** if you even have them? With the $49.95 Instant DR from LightNet Inc. in New York, you don't have to. It makes a sector copy of your drive and "hibernates it in a hidden partition," according to company president David Kricheff. You can schedule the backup to the partition whenever you choose. Right now it can take about 10 minutes, says Kricheff. If that seems slow, wait until January, when a new version promises to cut that to two and a half minutes — barely enough time to pour, let alone drink, a cup of coffee. ▪ Speaking of backups, for you parents out there who occasionally have childcare problems — you know, **Granny gets a virus or the nanny starts acting strangely** — Boston-based Children First Inc. offers backup child-care for businesses. Currently parents can register their little ones online, and beginning next year the company will let you go to its Web site to reserve a slot so you can drop the kids off in a pinch. Pity it's limited to 20 days per year per employee, otherwise you could fire the nanny and give Granny a break.
**◐ 43005**

### Profiles in Patching

Security Profiling Inc. in Lafayette, Ind., this week releases its **Multiple Path Remediation** security tool. When you need to patch a system but are unsure if the patch will break your apps, you can establish pretested policies that a sysadmin can follow.

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# PeopleSoft Expands Hosted Apps Lineup

BY MARC L. SONGINI

PeopleSoft Inc. last week added the business applications developed by J.D. Edwards & Co. to its line of hosted software and said it's now offering users three levels of hosting services.

Pleasanton, Calif.-based PeopleSoft, which bought J.D. Edwards in August, will offer that company's flagship midmarket applications as well as its AS/400-only green-screen software in hosted formats. J.D. Edwards hadn't managed its software for users since it canceled a hosting service

about three years ago, according to PeopleSoft officials.

The tiered hosting services announced by PeopleSoft include different levels of guaranteed system uptime, technical support levels and end-user maximums. For example, the entry-level "value" offering provides 99.5% availability for up to 100 concurrent users, the company said.

An "enhanced" service has the same uptime guarantee but can handle up to 300 concurrent users and offers expanded hours of operation for software customization work

and other support functions. PeopleSoft said the high-end "ultimate" offering provides 99.9% availability and round-the-clock support for as many as 500 concurrent users.

Hosting customers also now can keep their software in-house and let PeopleSoft's technicians manage the applications remotely.
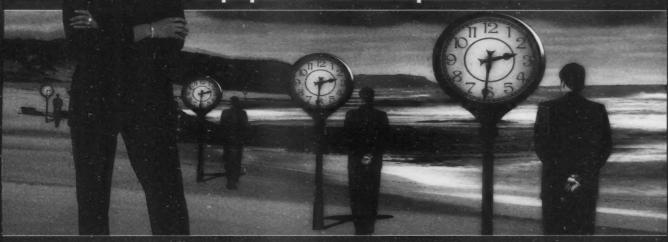
However, the new hosting capabilities failed to win over Jim Prevo, CIO at Green Mountain Coffee Roasters Inc. in Waterbury, Vt. "I'm not a fan of hosted applications of any sort," he said.

Hosting might make sense for some companies that want a fast implementation or are looking to simplify the installation of software upgrades and patches, Prevo said. But he added that he thinks running applications in-house would be less expensive and provide faster and more reliable performance.

In addition, staying in-house eliminates any fears that a hosting company will go out of business or jack up its prices when contracts run out, Prevo said. "I like to eliminate areas of risk when it comes to keeping my applications up 24 by 7, week in and week out," he noted. **◐ 43040**

# NEWS

# Siemens Scales Up IP Telephony System

## Adds dynamic rerouting capability

BY MATT HAMBLEN

SIEMENS AG'S U.S.-based networking subsidiary this week will announce an upgrade of its IP telephony system that can be scaled up to support as many as 100,000 end users on a single network.

Version 2.0 of the HiPath 4000 Real Time IP System will also support up to 12,000 IP phones on one of the specialized Unix servers that run the technology, three times more than the initial release that became available in April, said Ralph Riley, national manager of HiPath at Siemens Information and Communication Networks Inc. in Boca Raton, Fla.

The new version also adds improved network resiliency features, including the ability to dynamically reroute IP calls if problems occur, Riley said.

The HiPath technology works with both IP phones and circuit-switched Time Division Multiplexing (TDM) equipment, meaning IP calls can be routed over the public telephone network if need be.

The promised resiliency capabilities in Version 2.0 interest Elwyn Hull, director of telecommunications at the University of Texas Southwestern Medical Center at Dallas. The teaching hospital has been making a slow migration to a $2 million HiPath system that it started implementing last year to replace a 10-year-old TDM technology.

Hull said about 500 users are on the HiPath system now, and he plans to upgrade to Version 2.0 when it's released in April. Currently, network failures leave IP users without phone service. But adding Siemens' new IP Access Point 3700 devices at remote sites means the phones would "not be left stupid" because of an outage elsewhere in the network, he said.

Two years ago, before he bought the Siemens technology, Hull also evaluated a pure IP system from Cisco Systems Inc. and IP/TDM hybrids from Avaya Inc. and Nortel Networks Ltd. He said the medical center is building a redundant 10 Gigabit Ethernet network throughout its campus before completely trusting IP in all locations. "There's been a lot of hype about IP, and it's quite a bit more difficult and more costly for everybody than planned," Hull said.

Siemens is also announcing an OptiPoint 410 family of IP phones, which Hull said he will test with about 100 users at first. The phones deliver better sound quality than conventional devices through 7-KHz wideband voice transmission, which is expected to make it easier to use the phones with voice-recognition systems already in place at the medical center.

Ken Landoline, an analyst at Robert Frances Group Inc. in Westport, Conn., said Siemens has been third behind Avaya and Nortel in the traditional phone market in the U.S. but is making headway with hybrid IP/TDM systems. ◗ 43007

### MORE ONLINE

For networking resources, visit our Knowledge Center:

◗ QuickLink k1200
www.computerworld.com

### TECHNOLOGY DETAILS

**HIPATH 4000 VERSION 2.0:**
Runs on specialized Unix systems and includes separate IP Access Point 3700 devices for remote offices.
**Due:** Early April
**Starting price:** $400 per end user

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**OPTIPOINT 410:** A line of IP phones that feature 7-KHz voice transmission rates.
**Due:** January
**Starting price:** $140

## SBC Offers Hosted VoIP Service

SBC Communications Inc. last week announced a hosted voice-over-IP service that starts at $29 per phone on a monthly basis.

The VoIP service is available now in 18 U.S. cities, including Chicago and Los Angeles. SBC by year's end will add 15 more locations, among them New York, Philadelphia and Boston, and it plans to offer the VoIP capabilities in about 100 cities within the next 12 months, said Marianne Gedeon, director of voice and data convergence.

San Antonio-based SBC, which operates primarily in 13 Southwestern states, has regulatory approval to offer long-distance services throughout the U.S.

The $29 monthly fee covers all calls that individual users make over SBC's IP network, with conventional rates charged if calls have to be routed across the public telephone system. SBC also announced a $39-per-month unlimited rate that will cover all calls.

Jeffrey Kagan, an independent analyst in Atlanta, said Verizon Communications and BellSouth Corp. have announced similar enterprise-class hosted VoIP plans.

The rival offerings show that VoIP "is here to stay," Kagan said, adding that the former Bell companies are adopting the technology to remain competitive as new VoIP-only vendors such as Atlanta-based Cbeyond Communications Inc. enter the market.

– Matt Hamblen

# Softricity Ships New Virtualization Software

BY MATT HAMBLEN

Softricity Inc. last week announced the general availability of SoftGrid 3.0 virtualization software that will centrally manage applications for use on laptops, desktops and servers.

The new version includes support for the SoftGrid Management .Net Web Service and Microsoft Corp.'s Active Directory. The Web service enables integration of SoftGrid with third-party management tools such as the Microsoft Management Console and Microsoft Systems Management Server, said David Greschler, vice president of corporate marketing and co-founder of Boston-based Softricity.

SoftGrid deploys applications via proprietary software running on a SoftGrid Virtual Application Server, allowing the applications to run without being installed on the host computer, he said. Small portions of code are delivered in real time as needed to client machines such as desktops, laptops and Citrix Systems Inc. servers or Microsoft Terminal Services servers.

Anthony Lackey, chief technical officer at property services provider ABM Industries Inc. in San Francisco, said he has been using SoftGrid for five months and plans to upgrade to Version 3.0 to manage 3,000 Citrix thin clients. "We effectively operate as a corporate application service provider, delivering something north of 60 applications to thin clients," he said.

Installing SoftGrid 2.05 reduced the number of servers needed at ABM from 90 to 75, Lackey said, because fewer application installations take place with virtualization.

Prior to using SoftGrid, ABM was forced to preserve server space by being very selective about adding new applications. "We had the dilemma where we'd only do a new application if it was needed by 100 users, or it would [have to] run locally on a PC," he said. "And users didn't want to use PCs, frankly."

> ❝ **We had the dilemma where we'd only do a new application if it was needed by 100 users, or it would [have to] run locally on a PC. And users didn't want to use PCs, frankly.**
>
> **ANTHONY LACKEY,** CTO,
> ABM INDUSTRIES

Lackey hasn't done any formal return-on-investment calculations but said the savings yielded by removing 10 servers is "well above the cost of the SoftGrid software." The starting price for SoftGrid is $15,000, Softricity officials said.

Fidelity National Financial Inc. has reduced 13 logical server farms to one by using SoftGrid 2.05 and 3.0, said Paul Little, a configuration manager at the title insurance company in Jacksonville, Fla. SoftGrid allows different versions of an in-house commercial loan application to run side by side, he said, adding that "you can offload the processing and have the application centrally managed."

Dan Kusnetzky, an analyst at market research firm IDC, said Softricity is probably the largest of three vendors that take similar approaches to application virtualization. The other two are AppStream Inc. in Palo Alto, Calif., and Leostream Corp. in Burlington, Mass. ◗ 43017

# NEWS

## BRIEFS

### SAP Ties Apps to Sybase Databases

SAP AG announced plans to add support for Sybase Inc.'s databases to its business applications for small and midsize users. The SAP Business One software, which became available in the U.S. last March [QuickLink 37371], is currently limited to Microsoft Corp.'s SQL Server database. SAP said the applications should be integrated with Sybase's Adaptive Server Enterprise technology by May.

### HP Shows Increase In Sales, Profits

Hewlett-Packard Co. reported year-over-year increases in revenue and profits for its fourth quarter, which ended Oct. 31. HP's enterprise systems unit returned to profitability, putting all its operations in the black. CEO Carly Fiorina said she has "never been more confident in HP's competitive position."

| HP BY THE NUMBERS | | |
|---|---|---|
| REVENUE | | |
| Q4 FY03 | $19.85B | $862M |
| Q4 FY02 | $18.05B | $390M |

### GSA Drops Deal With IT Reseller

Reseller PC Connection Inc. said the U.S. General Services Administration canceled a contract with its government sales unit after a review showed that the company may have sold unqualified products or underpaid fees to the GSA. Merrimack, N.H.-based PC Connection placed the CEO of its GovConnection Inc. unit on a leave of absence and has launched an internal review of the matter.

### Short Takes

GATEWAY INC. said it will sell and support SUSE LINUX AG's version of Linux on its corporate servers. . . . ELECTRONIC DATA SYSTEMS CORP. has combined its business process outsourcing operations into a single unit and hired an executive from outside the company to run the new division.

# Cisco, Antivirus Vendors Team Up on Client Security

## Technology will ensure admission control and security policy compliance

BY JAIKUMAR VIJAYAN AND MATT HAMBLEN

CISCO SYSTEMS Inc.'s new Network Admission Control program, launched last week with support from three security vendors, is designed to help companies address the threats posed to their networks by improperly secured systems belonging to remote and mobile workers.

But users will have to wait until the middle of next year for the functionality to become fully available on Cisco's access and midrange routers.

Cisco, along with Symantec Corp., Network Associates Inc. and Trend Micro Inc., is developing technology that it says will help companies block network access to PCs, servers and other devices that aren't compliant with corporate security policies.

"We see it as a very positive step," said Edward Gotthelf, manager of network architecture in the Mahwah, N.J., data center of United Parcel Service Inc. "This whole industry has been hounded by new viruses, and basically there's a very limited amount of time to react."

"What we're talking about here is a very broad program to address admission control and compliance across the network," said David King, director of business development at Cisco.

With it, companies will be able to ensure that client systems have all of the required patches, antivirus software, firewalls and security settings that are mandated by policy, said Lily De Los Rios, vice president of product delivery at Symantec.

Systems that aren't compliant can be either blocked from network access or safely quarantined until remedial action is taken, said Steve Chang, CEO of Trend Micro.

The idea is to create a sort of "airlock" where remote systems are checked and validated for compliance, said Pete Lindstrom, an analyst at Malvern, Pa.-based Spire Security LLC.

Such measures are crucial at a time when client devices such as notebooks and handhelds are being targeted and used for worm and virus propagation, Lindstrom said. In many cases, infected PCs that belonged to remote and mobile workers reinfected already-cleaned networks during the recent Blaster attacks.

The Network Admission Control program uses a Cisco Trust Agent that's installed on each client system to collect information about the device's security status. This information is then used by Cisco routers to decide whether the system is in compliance with a company's policy. Cisco's partnership with the antivirus vendors will ensure that the latest virus signatures are always available when access control decisions are made, company officials said.

Cisco isn't the first vendor to attempt to address endpoint security issues with such technologies. Fremont, Calif.-based Sygate Technologies Inc., Mountain View, Calif.-based InfoExpress Inc. and San Francisco-based personal firewall vendor Zone Labs Inc. also sell products for enforcing security on remote systems. ◑ **43027**

### Secure Route

**Cisco's Network Admission Control program:**

- Is a facet of the Cisco Self-Defending Network initiative.
- Involves collaboration with three top security products vendors.
- Is aimed at helping companies secure risky remote client systems.

### LEARN MORE ONLINE

For additional information and resources, visit our Security Knowledge Center:

 **QuickLink k1200**
www.computerworld.com

## Cisco Upgrades Storage Switches, Adds SAN Routing

Cisco last week said it has upgraded the software on its multiprotocol storage switches, adding features such as Ficon connectivity for mainframe users and support for routing data between remote storage-area networks.

Cisco said its MDS 9000 switches can now handle what it called "inter-VSAN routing," which lets servers on different virtual SANs share disk arrays and tape libraries. The virtual SANs would remain separate from one another, but users would be able to transfer some data traffic between SANs without combining them into a single logical fabric, Cisco said.

The company added that the upgraded switches will also be able to use the Fibre Channel-over-IP (FCIP) protocol to do long-distance data replication to remote SANs for disaster recovery purposes.

IDC analyst Rick Villars said the new capabilities being of-

fered by Cisco are significant in that they're embedded in the MDS 9000 line's software, instead of requiring users to install separate processing modules like they have to do with some rival switch products.

### Priority Traffic

Rajeev Bhardwaj, product manager for the MDS 9000 line, said Cisco has also put quality-of-service controls in its switches. That allows storage managers to prioritize SAN traffic based on specific business requirements, such as putting transaction-processing database traffic ahead of backups.

Although quality-of-service policies are starting to take hold among storage managers, that capability will require cooperation between Cisco and vendors of host bus adapters and Fibre Channel adapters in order to work properly, Villars said.

Other new features in the

SAN-OS 1.3 software include a server-based version of Cisco's Fabric Manager network management tool that gives users central control of multiple SANs, plus support for standards such as the Common Information Model storage management interface and the Internet Storage Name Service protocol.

In addition, Cisco said the software upgrade adds support for intermixing open systems protocols like Fibre Channel, iSCSI and FCIP with IBM's Ficon mainframe connectivity and control unit port management technologies on the same switch through the use of virtual SANs.

The new software is due for release within 60 days and will be available through disk array vendors such as EMC Corp., Hewlett-Packard Co., IBM and Hitachi Data Systems Corp., which resell Cisco's switches and rival devices.

– Lucas Mearian

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# AT&T Wireless Ratchets Up Cellular Data Network Rates

## Upgrades nationwide service, says CRM problems are being addressed

BY BOB BREWIN
LAS VEGAS

AT&T WIRELESS Services Inc. last week launched an upgrade of its high-speed cellular network that's focused on corporate applications and designed to provide mobile users with average data transmission rates of up to 130Kbit/sec.

That's more than four times faster than the top speed of about 30Kbit/sec. that AT&T Wireless' current GSM/GPRS network delivers. The beefed-up network uses the same spectrum as the existing one and can be accessed nationwide as well as in Puerto Rico and Bermuda, the company said here at the Comdex/Fall 2003 show.

The launch of the EDGE network, a name that's derived from the phrase "enhanced data rates for GSM evolution," came one week after Redmond, Wash.-based AT&T Wireless disclosed that a faulty CRM system upgrade had caused major delays in activating cell phones for new GSM/GPRS customers [QuickLink 42831].

AT&T Wireless last week said in a statement that it had "made good progress in addressing the initial challenges with the start-up" of the upgraded CRM system. Daily activations of cell phones and calling services were at "near-normal levels," it added.

AT&T Wireless' new network isn't the fastest one to be announced in the U.S. Verizon Wireless last month launched in Washington and San Diego a cellular service that's based on Code Division Multiple Access technology and supports average data rates between 300K and 500Kbit/sec. And in June, Cingular Wireless introduced an EDGE service in Indianapolis.

But AT&T Wireless said that its network serves geographic areas with a total population of 215 million. The company added that it will deploy the EDGE technology throughout the Caribbean soon and offer the high-speed service across Canada early next year through an existing venture with Rogers Communications Inc. in Toronto.

Ken Pasley, director of wireless systems development at FedEx Corp., said the Memphis-based package carrier doesn't have any immediate need for the kind of data rates that are being promised by AT&T Wireless.

FedEx uses AT&T Wireless' existing GSM/GPRS service to connect its drivers' handheld computers to corporate systems, and Pasley said the current bandwidth is enough.

But Pasley added that he likes the fact that the higher speeds provided by EDGE give FedEx room to grow on new applications it develops. That potentially "unencumbers my future," he said.

AT&T Wireless has "raised another bar" in the cellular data services market, said Alan Reiter, an analyst at Chevy Chase, Md.-based Wireless Internet & Mobile Computing. But users need to evaluate coverage areas and the prices of PC cards and data phones in addition to throughput before signing any deals, Reiter said. ◐ 43036

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## On the EDGE

**WHAT IT IS:**
A high-speed network that uses the same spectrum as AT&T Wireless' existing GSM/GPRS service but is more than four times faster.

............................

**WHAT IT COSTS:**
Monthly pricing for laptop users ranges from $29.99 for transmitting up to 10MB of data to $79.99 for unlimited capacity.

............................

**WHERE IT'S AVAILABLE:**
In the U.S., where the EDGE service can be accessed in about 6,500 cities and towns and in areas along more than 30,000 miles of major highways.

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## Tablet PCs

connections from Motion Computing Inc.

HealthSouth CIO Randy Carpenter last week said the tablet devices will be used by physical therapists at the company's 1,400 physical rehabilitation centers. The application software running on the systems will give therapists access to patient records and let them document clinical progress, Carpenter said, adding that the wireless links will enable the therapists to be "completely mobile and at the patient's side."

However, tablet PC sales aren't a big business yet. First-year shipments of tablet hardware totaled about 420,000 units, according to Framingham, Mass.-based market research firm IDC. That's just a blip compared with sales of handheld computers, which amount to more on a monthly basis than the yearly figure for tablet PCs, said IDC analyst Alex Slawsby.

Scott Eckert, CEO of Austin-based Motion Computing, said that persuading IT managers to buy a relatively unproven technology such as tablet PCs requires a lot of time and effort by hardware vendors.

Sales prospects are spending up to six months evaluating the devices, Eckert said.

Another factor working against tablet PCs is a price premium of about $150 over notebook PCs, said Sam Bhavnani, an analyst at ARS Inc. in La Jolla, Calif. That quickly adds up to "real money" for companies that want to buy thousands of devices, he noted. Current prices listed by key tablet PC vendors range from $1,699 to $2,739 per unit.

Microsoft officials remain confident that tablet PCs will become mass-market products, said Susan Cameron, the company's group product manager for the technology.

The operating system upgrade will make it easier for users to input text and annotate PowerPoint slides, she said. It will also provide "context sensitivity" capabilities for translating written words into data. Cameron added that Microsoft expects future notebook PCs to include built-in tablet functionality.

### A Big Hit

Jeffrey Hodes, co-executive producer of the ABC television network's *According to Jim* sitcom, said the show's writers use tablet PCs made by Motion Computing to digitally annotate scripts during daily rehearsals and tapings. The annotations are transmitted to all 14 writers via a WLAN, said Hodes, who also is one of the writers.
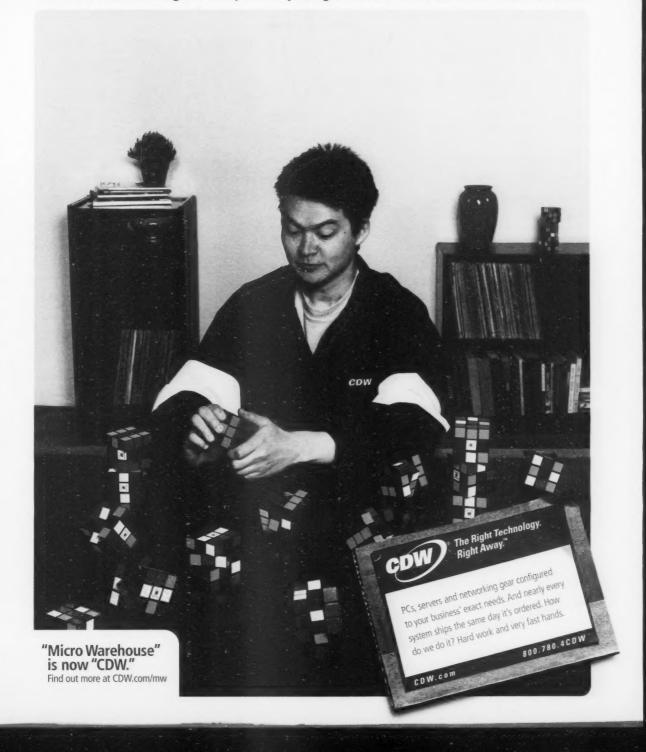
The technology streamlines the process of producing each day's final script and has helped reduce the use of paper by the show, which previously consumed about 180,000 pages per year, Hodes said.

John Harrington, director of integrated manufacturing systems at General Dynamics Corp.'s Electric Boat division in Falls Church, Va., said the maker of nuclear-powered submarines has deployed tablet PCs made by Fujitsu Ltd. to make it easier for its design engineers to modify computer-aided design drawings during the construction process.

Engineers use a WLAN to pull CAD drawings to the tablet devices, Harrington said. They can then compare the drawings against the construction work in progress, annotate any changes in a text format and send the drawing files back to Electric Boat's CAD system — a time-saving process that wasn't possible before the advent of tablet PCs, according to Harrington.
◐ 43035



JEFFREY HODES (right), co-executive producer of ABC's *According to Jim*, uses a tablet PC to annotate scripts during daily rehearsals.

# SSA Moves to Upgrade Baan's Old ERP Apps

## New owner will add Web user interface to aging but popular Baan IV line

BY MARC L. SONGINI

SSA GLOBAL Technologies Inc. last week said it will add a Web-based user interface and other new features to the existing versions of its Baan ERP applications, reversing a decision by Baan's previous owner to end development of those products.

Chicago-based SSA, which took control of the former Baan Co. in July, also committed to pushing ahead with development work on a delayed Baan ERP 6 upgrade that's due in July. But that will be preceded by the planned first-quarter shipment of enhanced Baan IV and Baan ERP 5 releases, the company said.

About 70% of Baan's 6,000 users still run the aging Baan IV software, and the revised development strategy could enable them to continue avoiding application upgrades.

Cory Eaves, vice president of solutions management and research at SSA, said the upcoming enhancements will give users a gradual migration path to Baan ERP 6.

"Our approach is to put out the carrot and not the stick," he said. "If the customer sees value in [Baan] ERP 6 and an easy migration path, they'll choose to upgrade. We want that choice to be theirs, not ours."

SSA's plan to rejuvenate the current applications got a big thumbs up from Keith Bearden, CIO at A-dec Inc., a Newberg, Ore.-based maker of dental equipment that uses Baan IV.

"This is very good news, not necessarily the browser interface itself, but the fact that they're supporting and offering new functionality for previous versions," Bearden said.

Bearden, who wants to wait at least a couple of years before upgrading to Baan ERP 6, said he plans to add the Web-based user interface to A-dec's system after it becomes available. He noted that Mike Greenough, SSA's president, chairman and CEO, said in September that the company will never "sunset" a product — a promise Bearden called "the best news I've heard from Baan in ages."

The two investment firms that jointly own SSA bought Barneveld, Netherlands-based Baan from Invensys PLC last summer and made it a subsidiary of SSA. Baan ERP 6, which is code-named Gemini, was originally due for release in September. But at its annual user conference that month, SSA said it was delaying the rollout until next year in order to ensure that the upgrade would be "a solid product" [QuickLink 41699].

Baan ERP 5 already supports Web-based application screens. The thin-client interface that's being added to Baan IV will provide users with full read/write and transaction-processing capabilities, plus improved support for remote access, according to SSA.

In addition, customers using Baan IV or Baan ERP 5 will be able to integrate those applications with other products in SSA's software portfolio to handle tasks such as plant maintenance and warehouse management, Eaves said.

SSA's new plan is a practical move that should help ease the upgrade process for users, said John Moore, an analyst at ARC Advisory Group Inc. in Dedham, Mass. In the past, Baan often moved too fast for customers by releasing software with questionable upgrade paths, Moore said.

The Web-based interface will make it easier for Baan IV users to share information internally and with business partners, Moore added. "For many, that's enough for now," he said. ○ 43039

> ❝ This is very good news . . . the fact that they're supporting and offering new functionality for previous versions.
>
> KEITH BEARDEN, CIO, A-DEC INC.

### ERP GALORE

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○ QuickLink k2000
www.computerworld.com

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## Bank Apps

enough Cobol programmers to maintain its existing core systems. Replacing the applications with new ones would cost the bank hundreds of millions of dollars, he estimated.

RBC began using WebSphere to tie together some front-end and back-office banking applications two and a half years ago, Teja said.

For example, the bank has Web-enabled its mortgage lending system and rolled out an online check-imaging service that uses WebSphere to provide links to transaction records stored on mainframes and retrieve electronic images from a third-party company that stores them for RBC.

"I think over time we would want to [change our core systems] if we could afford to," Teja said. He noted that an integrated set of applications could make RBC more responsive to customers. But a project of that magnitude "is a huge undertaking that will take three to five years and [require] a lot of bank re-engineering," he said.

On the other hand, it's costly to keep Cobol-based applications running. Gartner Inc. estimates that between 60% and 80% of a typical U.S. bank's IT budget is spent on maintaining mainframe systems.

In addition, the systems that support separate lines of business within banks often can't communicate with one another, even if customer data is consolidated into central files. To provide increased cross-selling opportunities, the stovepiped applications "need to converge into one integrated system," said Gartner analyst Avivah Litan. "But right now, unless you have millions and millions of dollars to spend, you just patch your way around it."

By taking advantage of Java 2 Enterprise Edition's code-reuse capabilities, banks could also modify their systems to support the rollout of financial products in weeks or months instead of years, reducing both development costs and time to market, said Bob Hunt, an analyst at TowerGroup in Needham, Mass.

In a report released this month, Boston-based research firm Celent Communications LLC called the replacement of core banking systems "by far the most costly and risky project a bank can undertake." But it predicted that worldwide spending on new core systems will reach $80.2 billion within two years.

### Development Plans

IBM last week announced a joint software development and sales deal with i-Flex Solutions Inc. in Bangalore, India. That followed on the heels of an alliance that it detailed with Jacksonville, Fla.-based Fidelity National Financial Inc. on Oct. 27.

Initially, IBM and Fidelity National plan to target banks in Japan for Fidelity National's J2EE-based technology, since they view Japanese financial institutions as needing new core systems even more than U.S. ones do. "The Japanese IT teams tell us they don't have any Cobol programmers," said Jim Wilson, president of the international division at Fidelity National's Fidelity Information Services unit.

Fidelity National's existing Corebank retail banking software, which is written in Cobol and runs on IBM's zSeries mainframes, is being extended to support J2EE as well as IBM's Unix and Windows servers. The two companies last week announced the release of the J2EE-based software in Japan and said the technology would be commercially available in the U.S. within 12 to 18 months.

As part of its deal with IBM, i-Flex plans to ship a J2EE-based version of its FlexCube for Retail Banking software in next year's third quarter. The two companies said the new release will also run on IBM's full line of servers, expanding beyond the support for IBM's Unix systems that's built into the current version of FlexCube. ○ 43037

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# OPINION

## MARYFRAN JOHNSON

# Customers in Control

TONY SCOTT has been coming to Comdex for 15 years, although as the chief technology officer at General Motors he could clearly delegate the task. He still makes the annual trek to Las Vegas because the legendary trade show, even on its deathbed, gives him "a snapshot of what's really being adopted" by other technology buyers.

This year he noticed not only the waning fortunes of Comdex and the dearth of significant IT vendors on the show floor, but also a product emphasis on "wireless everywhere, security everywhere." GM has long been an early mover in new technologies, Scott noted, from digital identity to Web services and wireless.

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"The one thing I really lose sleep over is security, thinking about the possibility of a Day Zero event — a unique worm or virus with a damaging payload," the CTO said. "I'm talking to various companies about how to detect those anomalous events."

Jeff Campbell, CIO at Burlington Northern and Santa Fe Railway, made the trip from Fort Worth, Texas, as a first-time attendee and speaker on one of the conference panels. He came into the top technology job only 13 months ago from the business side of the $9.4 billion railroad. BNSF moves one-fourth of the nation's rail freight across 28 states and two Canadian provinces (including enough grain to supply 900 million people with bread for a year) and considers itself an industry leader in Web-enabling a variety of customer transactions.

Campbell's focus at Comdex also centered on wireless and security products. All of the most promising emerging technologies that will have an impact on the railroad's future are related to networking or wireless: GPS, broadband and wide-area wire-

less networks, RFID tagging and VoIP.

But beyond the momentum behind an unmistakable "mobility with security" trend, both men also noted the dramatically shifting equilibrium of power in the computer industry. Vendors are no longer calling the shots or even controlling the direction on technology. For the first time, customers and consumers are in control of where technology is going.

"I'm seeing a lot less of the technology vendors pushing this or that. It's more the voice of the customer now," Scott said.

"It's a buyer's market," Campbell said, adding that the most compelling trends are being driven by the demand for ever-more-mobile data

access, the growth of broadband and increasingly smarter phones converging with handheld devices.

"The challenge of the CIO in the future is to handle this proliferation of mobility and to ensure the security of the enterprise," said Campbell.

Even in the federal government, where technology leadership lags other industries by years, customers are changing the rules and demanding performance-based software contracts with more risk shared by vendors ["Legislation to Alter Federal IT Services Procurement," QuickLink 42832].

Nicholas Carr, author of the infamous *Harvard Business Review* article "IT Doesn't Matter," was also at Comdex, speaking on one of the panels and reiterating his contrarian views about the commoditization of IT. Carr, too, has spotted the power shift from vendors to consumers. "IT wants to be shared," he said. "Technological, competitive and economic forces are pushing IT to become part of the broad business infrastructure. It's a very good thing."

The power shift from vendors to customers is undeniable. This is the time to sit with your key vendors and not just *ask* for changes in their products. Demand them. You're in the driver's seat, so drive. ◑ **42998**



"YOU WANT TO COMPLAIN TO MANAGEMENT? I **AM** MANAGEMENT."

## PIMM FOX

# Let's Talk (About Speech Recognition)

THE LINK between speech recognition and applications is tenuous. But the advent of speech application language tags (SALT) and Web services could create a better relationship.

John Cootz, a voice-recognition expert in the insurance industry, said one reason to expand from an automated telephone system is time efficiency. Customers simply want to be able to quickly do things like increase a deductible.

Getting there has been difficult. But new tools may bring some hope.

According to Cootz, using Web services with SALT, which is HTML-like code that lets you tag an existing application and link it to a speech-recognition program, can help make efficient connections to the speech system. There's no complex interface with the back end. Instead, only data is transferred. And with Web services, all the call data can be cached and flushed when the session ends.

Such an arrangement also lets you focus on a design around the customer benefit rather than application integration. "Speech is different than touchtone," says Cootz. "There's a perception of human interaction, so you have to ask, Does this provide a real customer benefit?"

PIMM FOX is a freelance writer in Santa Barbara, Calif. Contact him at pimm_fox@comcast.net

The speech-recognition work at Dallas-based Mary Kay Inc. is taking a similar approach. Karen Calvert, vice president of the cosmetics company's IT group, says Mary Kay makes personal attention a hallmark of all its communications with its 700,000 independent sales reps. The company defined the benefit in terms of being able to have someone call and say, "Hi, I'm interested in talking to someone about my last order." A speech-recognition system like the one Mary Kay is building with Intervoice Inc., also in Dallas, makes it possible to market different levels of service and to define

cutoffs to move callers to a live person or specific help.

"The thing you have to remember about speech is its flexibility," says Cootz. "You are going to want to test and tune your system based on focus groups. They'll show you where the obstacles are, and you can then plan your system to deal with the problems."

Another issue is benchmarking. For any speech system to be successful, you have to measure results against industry benchmarks as well as internal systems such as automated touch-tone telephone systems. But remember, speech isn't an overlay of touch-tone, so benchmarking may be cumbersome.

Finally, there are internal business expectations. Pinpoint the return on investment, the effect on expenses, the change to service offerings and the relationships to existing telephone services. These must be articulated.

After all, that's the essence of effective speech. ○ **42865**

## DAVID C. WYLD

# Don't Shoot The Internet

OVER THE PAST FEW weeks, every e-commerce entrepreneur and Internet innovator has been watching the congressional debate on whether we should lift the moratorium on Internet sales taxes. This question is as appropriate as asking, "Other than that, Mrs. Lincoln, how was the play?" That's because the gains in tax collections (albeit in the billions) will never offset the cost to e-commerce entrepreneurship and innovation. It's that simple.

This time, the pressure to tax Internet sales isn't coming from traditional brick-and-mortar retailers. Now we're bumping up against state governments, drowning in massive budget deficits. Of the 45 states that have retail sales taxes, 42 are participants in what is known as the Streamlined Sales Tax Project. This National Governors Association project is seeking to standardize sales tax laws to make them e-commerce-ready. The clear message to all online retailers: Watch out, we're coming after you.

Under current federal law, an Internet merchant must charge applicable sales taxes only for shipments to states where the seller has a physical presence.

And e-entrepreneurs face the prospect of dealing not just with 45 states, but also with more than 7,500 overlapping and multilayered U.S. tax jurisdictions. That would be crippling. Business might boom for vendors of tax compliance software, but their opportunity would come from the creation of a compliance nightmare, even for the best-intentioned business.

Big boys like Walmart.com and ToysRUs.com have voluntarily agreed to start collecting sales taxes nationwide to avoid legal challenges. But what about the majority of e-retailers? Simply put, the economic proposition for consumers to shop online would be fundamentally changed, because the

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5% to 10% difference in prices represented by sales taxes would disappear. This would lead directly to a dramatic decrease in online sales.

"At the end of the day," says Ed Foy, CEO of eFashionConsulting, "we're talking about layoffs. And the bottom line is that ultimately means less tax money going to the states, and no one — not the government, the consumer or business — wins."

That's reason enough for Congress to stop debating how long to extend the moratorium. Instead, it should enact a permanent ban.

This is a battle with huge ramifications for the future growth of e-commerce and, indeed, the American economy. If the Internet is seen as a tax panacea for states struggling with their budgets, the idea could spread around the world. And because Americans show particular e-innovativeness, U.S. e-entrepreneurs will bear a disproportionate share of taxation.

We should thus heed the call of Commerce Secretary Don Evans, who said, "The Internet is an innovative force that opens vast potential economic and social benefits of e-commerce," when he testified before Congress recently. "Government should not stifle e-commerce through multiple or discriminatory taxes," Evans warned. ○ **42893**

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# READERS' LETTERS

## Some Technologies Aren't Sinking So Fast

AMONG THE TECHNOLOGIES seen as sinking in the article "Submerging Technologies: Five That Are Sinking Fast" [QuickLink 41762] was IBM's SNA. I think those who work with SNA understand that its existence depends upon applications written to communicate using SNA-architected protocols. As long as these applications do the job, SNA networks will exist. In addition, the architects of SNA appear to understand the importance of TCP/IP products and are moving SNA to integrate well with IP transports. One example is the new push for transmitting Synchronous Data Link Control frames using User Datagram Protocol for SNA/Advanced Peer-to-Peer Networking. Another is IBM shipping mainframes with Gigabit Ethernet cards optimized to run only IP traffic. There is also SNA Switching Services, sometimes referred to as SNA over IP.

Both IBM and Cisco are pushing products aimed at replacing IBM's 37X5 communications controllers. It plays very well in an all-IP LAN/WAN environment.

**Ed Rabara**
*Dublin, Calif.*

I AGREED WITH MOST things in the article, but when it came to the death of tape, I had to snicker. Twenty-five years ago, when I started in this business, Storage Tech-

nology Corp. was in its infancy, and it grew by leaps and bounds as IBM pronounced tape a dead technology. Today, StorageTek is a $4 billion company, and there are more tape companies than ever before. While the storage technologies mentioned in the article all have their place, I don't believe tape will be disappearing anytime soon.

**Ray O'Connell**
*Camarillo, Calif.*

IS TAPE SINKING? I think that's wishful thinking on the part of those who are selling competing technologies. There will continue to be a place for it for many years to come. While disk storage for backup may work in certain situations, there's the problem of getting the data off-site for security. Internet backup isn't there yet, especially for organizations that regularly create large amounts of data daily. The cost of Internet data backup is pro-

hibitive unless you already have greater-than-T1 access.

**Dan Wells**
*Director of IT, MHTN Architects Inc., Salt Lake City*

CLIENT/SERVER IS DEAD yet again, having died every year since the mid-'90s. In your article on submerging technologies, John Parkinson of Cap Gemini Ernst & Young says that "a lot of that software was built with second-generation client/server tools, like Sybase's PowerBuilder and SQL Windows," and that it's becoming harder to find people with those skills and to get the object code to run well on newer technology. This shows how current he stays. PowerBuilder supports Web services, JSP, XML, etc. And PowerBuilder object code runs great on the newest hardware (including application servers). In these days of tight budgets and challenging business conditions, CEOs are looking for technology that performs, not

risking funds on unproven and risky new technology. But consulting firms are always recommending that customers change to the newest and coolest technology. They appear to be living in a dream of unlimited funds and the ability to constantly redesign applications.

**David Kaiser**
*Vice president of information services, State Fund Mutual Cos., Bloomington, Minn.*

THE "SUBMERGING" Technologies" article was quite good, but a couple of "in" items on the "Sinkers and Swimmers" list have issues that weren't explained. Blade servers generate lots of heat, and there are questions about the longevity of data on rewritable CDs and DVDs.

**Ken Aydlott**
*Multimedia programmer/analyst, Coastal Training Technologies Corp., Virginia Beach*

**COMPUTERWORLD** welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 500 Old Connecticut Path, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

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## MySQL's Strengths – and Weaknesses

THE SPEED OF MYSQL, according to your article ["MySQL Breaks Into the Data Center," QuickLink 41750], is due to its simplicity - one file for schema, one file for data, one file for index. This also reveals its weakness – no separate transaction log, no separate rollback log, no file duplication. All your eggs in one basket. For those for

whom low cost and high speed are more important than security, integrity, availability and recovery, MySQL looks good. For those for whom it is not, a slower, more complex, safer DBMS is required.

**David P. Vernon**
*Senior technical solution specialist, IBM Life Sciences, Tucson, Ariz.*

HOW DO YOU INCREASE your odds of retaining employees if you're in an industry plagued by revolving-door turnover? Convenience store giant 7-Eleven Inc.'s strategy is to use technology to reward performance through incentive pay in its nearly 3,000 stores throughout the U.S.

Prior to deploying an employee incentive management (EIM) system from San Jose-based Callidus Software Inc., 7-Eleven mostly used spreadsheets for compensation management. But the system had so many limitations that it was impossible to offer incentives to many employees.

"We primarily gathered data and loaded it into Excel spreadsheets, but invariably there was a manual process in which an analyst had to take compensation data and merge it with other data to make our incentive systems work," says Terry Guth, director of organization effectiveness at the Dallas-based company. "We just couldn't handle paying incentives to large groups of employees with a manual system."

With the Callidus EIM system, 7-Eleven can provide incentive pay to its 28,000 store managers and hourly employees based not only on a store's financial performance, but also on operational factors such as store cleanliness, quality customer service and product assortment.

"We've seen improvement in execution in stores because of increased attention and because we can pay incentives based on that execution," says Guth. "It's had a positive impact on morale, and our turnover has been down this year."

Numerous organizations are in the same situation. They need to offer variable pay based on individual or corporate performance, but they find it difficult to do because they have to deal with large numbers of employees, huge product portfolios and complex compensation plans with many variables. These challenges are generating increased interest in EIM and other compensation management systems.

Automating incentive management doesn't just enable businesses to pay workers more accurately. It also makes companies more accountable, provides them better modeling and reporting so they can react to changing dynamics and helps them improve relationships with their employees. EIM is becoming a key component in larger compensation management initiatives, which in turn play instrumental roles in burgeoning corporate performance and human capital management strategies.

"The focus for EIM is customer-facing roles that may have an impact on revenues," says Monica Barron, an analyst at Boston-based AMR Research Inc. Though initially used for sales force compensation, Barron says, EIM is also finding traction in call centers, in financial institutions for bank tellers involved in cross-selling and up-selling, and in retail situations where employee compensation is tied to store productivity and profitability.
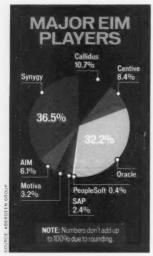
"If I work for Pratt & Whitney and sell one jet engine per year, it's not going to be tough to figure out a commission. But if I work in insurance or retail or consumer goods, where I'm selling hundreds of items in a week with different types of incentive plans, it's very difficult to calculate quickly enough to get payments out on time," Barron says.

It was compensation-plan complexi-

# PERFORMANCE PAY

Incentive management software can help companies retain employees by making sure they're rewarded for meeting their goals. **BY KYM GILHOOLY**

INCENTIVES

**MAJOR EIM PLAYERS**

Callidus 10.7%
Centive 8.4%
Synygy 36.5%
32.2%
AIM 6.1%
Oracle
Motiva 3.2%
PeopleSoft 0.4%
SAP 2.4%

NOTE: Numbers don't add up to 100% due to rounding.

SOURCE: ABERDEEN GROUP

ty that drove Amersham Biosciences Corp. to abandon its spreadsheet-based system to outsource EIM to Conshohocken, Pa.-based Synygy Inc.

"For 200 sales reps [for North America], we have more than 20 sales incentive compensation plans," says Dan Eldridge, manager of business operations at Piscataway, N.J.-based Amersham. With more than 6,000 products in the biotech equipment supplier's portfolio, "clearly we don't incentivize at the product level, but with numerous compensation plans, often involving multiple credits, the process of accurately compensating is very complex," he says.

Beyond the difficulties generated by the plans themselves, Amersham had problems with sales report accuracy and timeliness of incentive payments, says Eldridge. "It was such a manual process: for every plan participant, we had to basically create an Excel workbook. It would take us six to eight weeks to calculate the quarterly incentives, and once we paid the incentives, we would spend another two to four weeks dealing with corrections. So during a good quarter, we would spend 10 weeks doing incentives and two weeks doing value-added work."

This intensive effort limited Amersham to updating sales reps with progress reports on incentive goals only once per quarter. With Synygy handling EIM, Amersham can quickly calculate variable pay, and reps can readily check reports via the Web-based Synygy Viewer. Eldridge has been able to eliminate one compensation analyst

position, but more importantly, he says, "we've been able to distribute individual responsibilities so that my department has become a value-added resource for the entire company."

## Suite Deployment

Though EIM offerings are attractive to companies struggling with variable pay plans, the number of employers deploying them is still relatively small. According to AMR, revenues for the EIM segment were $112 million in 2002 and are expected to reach $235 million by 2007. Homegrown systems still remain the most stalwart competition to commercial EIM offerings. However, many companies may eventually find the homegrown tools to be too inflexible, and vendors are making strategic moves to be there when they do.

In addition to best-of-breed vendors such as Callidus, Incentive Systems Inc. and Synygy, ERP/CRM vendors are adding EIM capabilities through innovation or acquisition. For example, Siebel Systems Inc. just bought Motiva, and Oracle Corp., SAP AG and PeopleSoft Inc. have added compensation capabilities to attract customers that want to leverage integration with larger suite deployments.

One such company is Minneapolis-based Select Comfort Corp., a specialty bed and accessories manufacturer and retailer, which opted to leverage its suite of Oracle financial, manufacturing and human resource applications when it went looking for an EIM application.

"We basically had an archaic employee-compensation plan: It took a number of days to calculate compensation, and it was done all manually on a homegrown Access application. With nearly 350 stores, we outgrew it," says Tom Wysocki, director of strategic systems migration at Select Comfort.

"Our compensation plans are pretty complex because our sales reps can switch stores on a daily basis, and we have different bonus plans for managers, district managers and regional managers," says Jason Otten, a software developer at Select Comfort. "Under the old system, it would take a person three weeks to do comps, then they'd take a week off and start all over again. With Oracle's OIC [Oracle Incentive Compensation], it probably takes three days, and with the new version of OIC [11.5.8] and our better implementation of it, it will take a matter of hours."

Select Comfort will continue to face challenges, as will any company reconciling EIM with legacy data stores and

compensation complexities. "There will always be some issues from the IT perspective," says Wysocki. "We still face challenges with recalculations for warranties and returns — how do we manipulate all that? Our feeling is, if [a system] services 80% to 85% of requirements, grab hold because you can customize the rest."

"Our biggest problem is when we break our own rules because each of those requires manual adjustments," adds Otten. "We do about 60,000 transactions per month, and they're 99% correct, but you can't have rules for every situation."

7-Eleven, too, faces data integration challenges. To feed the Callidus system, the retailer has to pull in multiple line items, like store-level, subgroup-level and market-level data, as well as performance data.

"With thousands of data points, there's a certain amount of error that's going to be a part of that data. But when you're dealing with someone's compensation, it has to be perfect, and the world of IT often does not operate perfectly," says Guth. "There's a chal-

lenge for HR on understanding the limitations of integrating large databases and for IT on recognizing the standard they had established — one-tenth of a percent error rate — isn't OK anymore."

An EIM deployment can be a good time for executives to examine whether these plans are necessary, Barron says.

Moreover, EIM systems can deliver tangible and intangible returns on investment by reducing overpayments, ensuring that payments are made on time and improving employee relations, says Jim Holincheck, an analyst at Gartner Inc. "You might not reduce head count much, but it's worthwhile to get better accuracy, happier employees and better alignment with corporate strategies. There's some cost savings, but justification comes more from the flexibility to adjust plans, reduce errors and increase employee productivity," he says. ○ 42634

*Gilhooly is a freelance writer in Falmouth, Maine. You can reach her at kymg@maine.rr.com.*

# JUST GIVE ME MY MONEY

**THE ABILITY TO DELIVER** timely, accurate payments and thereby improve relationships with employees is one of the most touted benefits of EIM. Another is improved productivity, a goal that's furthered by giving employees access to variable pay systems so they can regularly check commission rates, progress on quotas, payment schedules and other information.

At Liberty Mutual Insurance Co. in Boston, providing Web-based visibility into its EIM application "has been a big thing for sales reps and agents," says an information systems manager at the company. "If they can see what's happening on a regular basis, both motivation and productivity are much better." With its EIM application from Incentive Systems in Bedford, Mass., Liberty Mutual has gone from being two months behind in compensation payments to processing them every 15 days.

Employees who can easily see their official commission accounts on a regular basis tend to trust the figures they see and stop wasting time keeping "shadow" accounts. "Sales reps were keeping their own spreadsheets to check their tallies," says the manager. Now they can access the company's portal and see what they've sold and

what their commissions are.

EIM can also boost productivity for managers and compensation analysts, who, when using manual systems, can be inundated with calls from employees checking on their progress and complaining about underpayments, says Gartner analyst Jim Holincheck. "Salespeople do the best job policing these things, and with self-service, they can see for themselves what's going on and get it addressed," he says.

And what of the reputation pinned on salespeople as Luddites, a rap that gained credence when sales force automation hit the mainstream? At Amersham Biosciences, "most of our reps have taken to [the new EIM system] rather well, but we do have a mature sales force, with a number close to retirement age, and they're kind of technophobic," says Dan Eldridge, manager of business operations. With its old system, the company mailed green-bar reports to reps, and one rep wanted it to continue that practice with the new reports – a request Eldridge denied. But most of the reps, he says, are thrilled with the new system. "It was such a drastic improvement; they couldn't help but love it," he says.

*– Kym Gilhooly*

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# Improved Security Through IT Diversity

**Security expert Bruce Schneier explains why homogeneous systems are risky and why software vendors should be held liable for the bugs they create.**

*In his recently released book,* Beyond Fear: Thinking Sensibly About Security in an Uncertain World *(Copernicus Books, 2003), security guru* **Bruce Schneier** *argues for a more common-sense and less technology-centric approach to both IT security and physical security. In this interview with Computerworld's* Jaikumar Vijayan, *Schneier shares his views on IT security.*

**You recently co-wrote the report "CyberInsecurity: The Cost of Monopoly. How the Dominance of Microsoft's Products Poses a Risk to Security." Would you have written it if the world had been standardized around another operating system?** Of course. The problem is not specific to Microsoft; it's a general problem of monocultures. The security risks would be no different if the country standardized on Macintosh System 10 or Linux. The security risks were the same in 1989, when the Morris worm propagated freely in an Internet that standardized on Unix.

**Are there benefits to having a homogeneous IT environment that outweigh the potential risks?** In some ways, it's a judgment call. The question is whether you don't put all your eggs in one basket, or you put all your eggs in one basket and

guard the basket. In balance, I think that the risks of a monoculture in operating systems outweigh the advantages.

**Last year you wrote about the need to fix network security by hacking the business climate. What did you mean?** Network security is plagued by good technical solutions that just don't work. Companies install firewalls but don't configure them properly. Network administrators don't install patches. Software companies don't write secure software. The problem here is not technical, but economic.

**What do you mean when you say** that secure software is an economic problem? The economics of security is such that the effects of insecurity are largely an externality — the costs aren't borne by the companies making the security decisions.

The only way we can fix computer security is to fix this economic problem. We need to take the companies in the best position to fix all these security problems — the software manufacturers — and make it in their best interest to do so. For years I've advocated software liability as a way to do this. Once a company like Microsoft is liable for damages as a result of its software vulnerabilities, you can be sure that they'll start taking those vulnerabilities seriously.

**But don't users have a responsibility as well?** It's clear that Microsoft doesn't bear 100% of the responsibility for these problems. But it is also clear they don't have a zero percent liability. That is what the courts should decide. Courts do this all the time. How much

**BRUCE SCHNEIER**

**Title:** President

**Company:** Counterpane Internet Security Inc.

**Location:** Minneapolis

**Accomplishments:** Schneier is co-founder of Counterpane and the author of the Blowfish algorithm and several authoritative books on encryption. His most recent book, *Beyond Fear: Thinking Sensibly About Security in an Uncertain World,* discusses security in a post-9/11 world.

**Q&A**

contributory negligence is each party responsible for?

**What's to be done about the patching problem?** There is nothing that can be done. There are too many patches, they don't work very well, and companies can't keep up. Blaming companies for not installing patches is blaming the victim — it's not right, and it's not fair. Software quality needs to improve; patching after the fact no longer works.

**Why hasn't technology helped make us physically safer?** Technology hasn't made us safer because safety is not a function of technology. Real security comes from people. Technology is just a security tool. There are lots of examples post-9/11 where [people have assumed] that technology will solve their problems. People think that magic technology will make them safe. That is not the case.

**You argue that the focus should not be so much on threat avoidance but on risk management. What do you mean by that?** Security is always a trade-off: What are you getting vs. what are you giving up? Sometimes more security makes sense, and sometimes less security makes sense. When people think about security, they inherently think in terms of this risk management trade-off mentality. It doesn't matter how effective a security system is at avoiding the threat. If a security system does not make business sense, it's not going to be installed.

**How can companies move from the threat-avoidance IT security model to risk management?** All

it takes is for the CFO to be in charge of security. The last thing you want is for security people to make these sorts of security decisions, because they don't have a broad enough view. You need a financial person to look at the risks, the risk reductions and the costs.

**Why is it so hard for companies to get IT security funding these days?** From the point of view of the CEO, the risks aren't very great. It's just not worth spending a lot of money on security. That view is changing as we speak, however.

**What's driving that change?** The increasingly public Internet epidemics. It's in the news all the time.

**Why are companies having such a hard time measuring the effectiveness of their IT security efforts?** It's hard to measure how effective security is. If no one ever robs your home, does it mean that your home security is good, or does it mean that no one has bothered trying? In some ways, you make your best bet based on houses around you or in your neighborhood or by measuring comparables. The problem is that there is no standard benchmark against which to measure your own security. Even worse, if you have had no successful attacks, you might get your budget slashed because "obviously" there's no need.

**What's your position on full disclosure of vulnerabilities?** The only reason that software companies are paying attention to vulnerabilities and issuing patches is because of full disclosure. Before researchers started publishing vulnerabilities publicly, software companies would routinely deny that the vulnerabilities existed. Full disclosure is what's getting them to take security seriously, and it's what's keeping them honest.

Yes, it also helps the bad guys. But the benefits grossly outweigh the disadvantages.

↻ 42107

## Artificial intelligence is making online commerce more flexible and powerful.

*When electronic marketplaces evolved out of the dot-com boom of the late 1990s, conventional wisdom held that these digital exchanges would operate more efficiently than physical marketplaces by removing the middleman and streamlining the procurement process.*

*And while some of these exchanges have generated significant operational efficiencies for their participants,* **Tuomas Sandholm** *has identified other improvements that can be realized. Sandholm, who runs the Agent-Mediated Electronic Commerce Laboratory at Carnegie Mellon University in Pittsburgh and is an associate professor in the school's computer science department, has patented a method for determining the best rules to apply to decision-making processes.*

*The approach, which draws upon artificial intelligence and operations research techniques, can be applied not only to business-to-business auctions but also in setting rules for divorce settlements and evaluating public works projects.*

*Computerworld's Thomas Hoffman recently caught up with Sandholm, a 34-year-old former world-class windsurfer, to discuss the work he has been doing in AI and e-commerce.*

**FUTURE WATCH**

[

A bidder can say, "I'm willing to pay $100 for Items 6, 7 and 8." But the problem of determining who wins what items is a most difficult problem, and we've built algorithms to help address this.

**- TUOMAS SANDHOLM**

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# Smart Auctions

**Describe the research you're doing.** At a high level, what we do is design and build electronic marketplaces that lead to more efficient outcomes. Think of a traditional procurement auction. The seller has to "prelot" the items to be bought. But that doesn't always meet the bidders' needs and optimize the marketplace. What we've created are auctions where people can bid expressively by building their own self-selected lots [of merchandise].

For example, a bidder can say, "I'm willing to pay $100 for Items 6, 7 and 8." But the problem of determining who wins what items is a most difficult problem, and we've built algorithms to help address this.

**What's an example of this?** Consider an auction where the bidders have submitted bids on different, overlapping packages of items. For example, one bidder can bid $100 for A, B and C. Another bidder bids $50 for C. A third bids $70 for B. Now, in this small example, it is relatively easy to see that the auctioneer should accept the latter two bids because he will collect $120, which is the highest possible revenue.

On the other hand, if there are tens of bids, this becomes difficult to determine by hand. Our algorithms solve this problem optimally with even hundreds of thousands of bids. The techniques used are AI searches.

**How else can AI be applied to e-commerce? What are the current hurdles, and can they be overcome?** There are lots of different things that can be applied here. Another stream of research we're doing is automated mechanism design. Mechanism design is a subfield of game theory. The game might be about designing the rules of an auction or that of a divorce-settlement arbitration or a public forum over whether to build a hockey rink or a bridge.

Here, the idea is to design the rules of the game automatically using optimization and AI. We've solved a number of open problems, such as designing optimal public-good voting schemes and revenue-maximizing multi-item auctions.

These are all very recent initiatives. This has only been going on for a year and a half.

**What are examples of some "rules of the game"?** We

have generated optimal — that is, in the sense of maximizing the sum of the divorcees' utilities — divorce arbitration schemes. In usual divorce arbitration, the divorcees might lie about how much they value the different assets that are to be divided up. In our scheme, the divorcees are motivated to tell the truth, and the assets are divided as well as possible.

We have also used our automated mechanism design software to design optimal rules for public-good problems. As an example, we have studied the question of whether to build a bridge, an ice hockey rink, neither or both. Again, this is tricky because the different parties may lie about how much they value the different choices. Our system designs the rules so that they are motivated to tell the truth, and the social choice is as good as possible.

**What new technologies are you working on that might emerge on the market several years from now?** Consider voting. A seminal result in voting theory states that every voting protocol that is not dictatorial is manipulable in the sense that in some cases a voter can achieve a better outcome for himself by voting strategically — that is, ranking the candidates differently from his true preferences. We are designing voting mechanisms where constructing a strategic vote [ranking] that benefits the voter is probably so hard computationally that the voter cannot do better than tell the truth.

In other words, we are using computational complexity as a barrier to strategic behavior. ○ **42706**

## Sandholm Semantics

**Operations research.** The application (typically) of scientific, mathematical and computer techniques to solve optimization or decision-making problems.

**Game theory.** The study of how groups of people interact either for a common cause or for their own individual goals.

**Reverse auction.** An innovative pricing technique, typically conducted online, in which sellers compete in real time by bidding lower as they see other prices.

**Expressive auction.** An auction in which buyers bid on self-selected packages of items or express their preferences in purchasing items, such as, "I don't want any single supplier to win more than 15% of my business."

**Mechanism design.** An automated way to design the rules of a game so that participants are motivated to report their preferences truthfully and so that a socially desirable outcome is chosen.

To MANY IT PROFESSIONALS, application packaging may sound like the shrink-wrap you tear off a box, but for Doug Glenn, it's a critical step in controlling Windows application support costs. Glenn, senior technical analyst at electronics manufacturer Kemet Electronics Corp., uses a suite of tools from Plymouth, Mich.-based Wise Solutions Inc. to help control the installation process and deliver a consistent set of updates for some 200 applications his group has deployed on Kemet's 3,000 Windows desktops and laptops.

Under pressure to manage support costs, IT groups are increasingly locking down desktops using software distribution tools that automatically deliver applications, issue security updates and patches, and repair damaged applications on the fly. But these tools can't work effectively without a fundamental building block: application installation routines that have been properly packaged so that, once distributed, the Windows Installer (WI) service on each target machine can deploy them cleanly and without conflicts. Although these third-party packaging tools can help, the process of bundling applications isn't always easy, users say.

## Packaging Benefits

The use of application-packaging tools has picked up since Microsoft Corp. introduced WI with Windows 2000, says Ronni Colville, an analyst at Gartner Inc. in Stamford, Conn. Prior to that, users and software developers created custom installation scripts that often overwrote Dynamic Link Library (DLL) files used by other programs — a situation administrators dubbed "DLL hell" — and that took vastly different approaches to the installation process.

WI has standardized that process by dictating the use of a Microsoft Installer, or .MSI package file, that specifies in detail how and where WI should deploy an application. A database containing configuration data, the .MSI file also lets WI keep tabs on issues such as attempts by one application to overwrite a DLL in use by another. And since it tracks all aspects of the application's installation, WI can support self-healing, or detection and transparent reinstallation of components that have been corrupted or accidentally deleted by the end user.



GINA TRIPLETT

# Apps UNDER WRAPS

Application-packaging tools can cut desktop support costs by delivering consistency and eliminating conflicts. But the tools require training to master and won't succeed without strict desktop management policies.
**BY ROBERT L. MITCHELL**

While software developers use packaging tools to create .MSIs to ship with their applications, administrators such as Glenn use them to customize those installation files by creating a supplementary .MST "wrapper" file called a transform, or to repackage older, noncompliant setup.exe files into .MSI files that WI can deploy. The tools read the .MSI file directly or run the noncompliant setup.exe installation program and compare snapshots of the machine's state before and after it runs to identify the changes made.

Transforms pick up where the software vendor's .MSI installation routine leaves off, customizing it to enable automated, "silent" installs of Windows applications by automatically answering prompts for information such as the target installation directory.

Such silent installs offer a big payoff when combined with software distribution tools that fully automate the deployment, says Glenn. "We can roll out an entire department in 10 or 15 minutes, and the technician doesn't need to stand in front of the machine to install it," he says.

These packages also include a conflict management database that lets the IT staff detect and correct potential interoperability problems with other applications before deploying a new package on users' machines. IT staffers can then distribute the "packaged" applications, either by using the group policy features of Windows' Active Directory or through a software distribution tool such as Tivoli.

"Installation failures have dropped dramatically since we standardized," Glenn says. So have the number of application problems arising from difficult-to-diagnose conflicts. "Our problem calls have dropped by 50%. Instead of six [desktop support] people, we're now down to three," he says.

## Conflict Resolution

Packaging specialists cite another compelling argument for using installation packaging tools: They can help to quickly identify potential conflicts with time-critical security patches and hot fixes before pushing them out to desktops. Patch deployment "has been absolutely huge for us," says Judi Folkert, packaging programmer analyst at furniture maker Herman Miller Inc. in Zeeland, Mich., noting that her company has assigned a full-time Windows NT administrator for patch management.

Such advantages have resulted in a growth in application packaging, in some cases elevating it from a niche function within the software distribution group to a separate group with its own staff, says Gartner's Colville.

Benjamin Seeley maintains more than 200 packages at a large Midwestern financial services company. His packaging group includes four full-time staffers. They use the conflict management database in InstallShield AdminStudio, a packaging suite from Schaumburg, Ill.-based InstallShield Software Corp., to assess new applications for problems before the company buys them, he says. "It really does reduce your cost of ownership," Seeley says, adding that the 10 to 20 hours required to package and test one software update can save hundreds of hours during deployment.

But application packaging also presents new challenges. Preparing applications is a multistep process that involves planning with end users to understand

what functions are needed, extensive lab and end-user pilot testing of each package, and a solid understanding of the WI architecture. A technically competent administrator can learn how to use the packaging tools with a week or two of training, but users say the finer points of detecting and sorting out application conflicts come only with experience. "You're looking at something that's almost like a foreign language," says Glenn.

Managing expectations is another issue. Although vendors may stress how quickly a packaging tool can create a transform, the time to full deployment varies widely with the complexity of the application. While a simple patch may take a few hours, a package such as Microsoft Office can require two weeks or more, Folkert says.

Seeley says he sets user expectations for turning around a project up front. "We give a general rule of thumb of five business days," he says.

Another issue: Packaging tools can't succeed in an unmanaged desktop environment. "If your company doesn't have a good computer-use policy and you don't enforce standards, then using a tool like this will be an exercise in frustration," says Glenn. "Manual [unauthorized] installs can throw you for a loop. If you're not aware of them, and they've replaced a DLL, you're not going to know about it."

## BEYOND WINDOWS

Why packaging tools for Linux and Mac OS are less compelling:

**Tool Time:** Here's a list of application packaging tools – including one freebie:

Adding to the frustration and workload is the fact that commercial application vendors haven't exactly raced to migrate their installation programs to the .MSI format. That means packagers must create an entire .MSI install instead of just customizing the vendor's .MSI with a transform. Colville says most new Windows application releases use the .MSI format, and she predicts that most applications will have migrated by the end of 2005.

Users aren't so sure. "In the financial industry, I don't see that many people doing .MSIs yet," says Jeff Goldman, an application administrator who manages some 350 applications at Delaware Investments, a subsidiary of Lincoln National Corp. in Philadelphia.

Seeley is also waiting. "I would say 80% of applications still come through without being in an MSI format," he says.

Even when vendors have migrated applications to .MSIs, they often haven't followed Microsoft's standards. "They have done some incredibly stupid things in their installers, and as a packager, you have to figure out how to work around [vendors'] nonstandard choices that conflict with Microsoft's best practices," Folkert says.

Packaging tools include a validation function that identifies possible .MSI compliance issues, but interpreting sometimes hundreds of errors, figuring out whether they're important and determining how to resolve them isn't easy, users say. Seeley says problems are abundant but that most he has encountered weren't "serious infringements."

Folkert and Glenn, on the other hand, each cite serious problems with several applications, including Lotus Notes. Both say their experience with Notes left them frustrated. "Notes has something like 1,300 errors in [its .MSI]. We cannot use their .MSI because basically it's broken," says Glenn, who ended up repackaging it into a new .MSI.

Nonetheless, says Seeley, packaging tools are "a step in the right direction." And WI also continues to improve, says Colville. "You'll see a new flavor coming out next year," she adds. ✪ 42711

> As a packager, you have to figure out how to work around [vendors'] nonstandard choices that conflict with Microsoft's best practices.

**JUDI FOLKERT,** PACKAGING PROGRAMMER ANALYST, HERMAN MILLER INC.

# Security Policies? What Security Policies?

**Without active follow-ups, security policies go unread, educational programs fade away, and viruses come roaring back.**
**By Mathias Thurman**

I WAS HAVING LUNCH with a group of IT department staffers when the conversation turned to the rash of virus-related worms that have plagued our organization over the past few months. Too many times, I said, an unsuspecting employee has opened an e-mail attachment from an untrusted source and introduced malicious code into our network.

To my surprise, one person asked, "How are we and other employees supposed to know not to open certain types of attachments?" I was stunned. We have an orientation program and policies that have been published to educate employees on the acceptable use of IT resources, I explained.

They looked at me with blank stares. None of the half-dozen people at that lunch table — a mix of veteran staffers and new hires — had ever seen our IT security briefing or the published security policies that I had labored so hard to produce. Yet we had posted the policies on our intranet six months ago, and they're supposed to be required reading for every employee.

In addition, I had given the human resources department a copy of our security policies and a PowerPoint presentation that it could use to explain them to new employees. HR was supposed to be using the slide show to brief all new hires during their orientation workshops.

What happened? Unfortunately, there isn't a procedure to require new employees to read the policies or a sign-off mechanism to ensure that they have read and understand them.

In addition to developing the presentation for new hires, my department had broadcast several e-mail messages to current employees, with a pointer to the IT security Web page that contains our policies, procedures and guidelines. That page had received just 560 views from a population of more than 6,000 employees.

I proceeded to follow up by scheduling a meeting with HR. The woman I spoke with was new; the HR representatives I had dealt with before had left the company. She said she had seen the IT security presentation but wasn't aware that HR was supposed to be using it. And her priority, she noted, was handling things like payroll and benefits.

She did assure me, however, that she would eventually review the materials and start presenting them.

> **None of the [staffers] had ever seen the IT security briefing or the published security policies that I had labored so hard to produce.**

Clearly, it wasn't registering with her that this might be important. So I explained how the recent virus outbreaks had consumed countless numbers of man-hours and caused much frustration within the IT department.

As it turned out, the HR staffer remembered someone calling her to schedule a virus removal on her own workstation, but she had no idea of the magnitude of the problem.

This recent virus infestation could have been minimized or avoided altogether, I said, if users had read and followed the security policies.

Then I brought up the incident regarding an employee the company recently terminated after he used company IT resources to share and distribute child pornography online. If that user had been aware of the acceptable-use guidelines and known we might be monitoring that activity, perhaps he would have thought twice before engaging in unauthorized or illegal activity on company time, I argued.

## Taking Further Action

In the end, to get things back on track, I agreed to participate in the new-hire orientation program by making the security presentation to new employees until the HR staff felt comfortable enough to run through it itself.

In light of the virus problems we've suffered of late, I decided to spend a few days reviewing and editing the slides to include some additional information about malicious code. So far, I've spoken at one orientation session. Not surprisingly, most of the inquiries were about e-mail and how to handle suspicious file attachments.

I also distributed handouts with the address for our IT security Web site and contact information for members of the security team.

It's every employee's responsibility to periodically review the company intranet for new information and to review policies and guidelines, I stressed. And I explained that by reviewing the policies, employees can help the company identify suspicious activity and prevent malicious code from being introduced into the network.

But that's not enough. I'm considering hosting a series of brown-bag lunch meetings and asking the HR department send out e-mails stressing the need to adhere to and understand security policies. And I'm looking into deploying new tools that can help me enforce policy dissemination.

What I need is a Web-based application that can track which employees have viewed the policies and whether they have read all the ones that apply to their job functions. Depending on the job, certain policies apply more than others. For example, a marketing representative doesn't need to understand the Unix remote access policy.

I already have vendor propaganda. What I need now are references from experienced users. If you have any background with such applications, I invite you to send me an e-mail or share your thoughts in the Security Manager's Journal forum. ▶

## WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com, or join the discussion in our forum. **QuickLink a1590**

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**

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## SECURITY MANAGER'S JOURNAL 🔒

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NICHOLAS PETRELEY

# NetWare Reloaded

LIFE IMITATES ART, or at least popular entertainment, more often than we'd like to think. Some of the current drama in the IT industry has intriguing parallels to a recent, popular movie sequel. Here's an excerpt of how the screenplay might go in the IT universe version:

[Immediately after gratuitous kung fu fight scene No. 14, CEO Morpheusman appears in front of a small crowd.]

**CEO Morpheusman:** Novell customers! Hear me! It is true, what many of you have heard. The competition has gathered an army, and as I speak, that army is drawing nearer to our homes.

[Tiny crowd of subjects wearing red T-shirts emblazoned with an *N* whisper anxiously among themselves.]

**CEO Morpheusman:** I stand here without fear because IBM remembers. IBM remembers that I am here not because of the path that lies before me, but because of the path that lies behind me! IBM remembers that for 10 years we have owned Unix. And after a threat of war from SCO, IBM finally remembered that which matters most: We are still here!

[A few people applaud in the crowd, followed by gratuitous kung fu fight scene No. 15, after which Councilor IBM meets with Neovell on the engineering level at Zion.]

**Councilor IBM:** Do you care for some company?

**Neovell:** Zzz. . . . Huh, what? No thanks, we're still trying to figure out what to do with Ximian.

**Councilor IBM:** I was thinking about Linux. Take a look at these machines. I like to be reminded that this company survives because of our machines, not the operating systems that run on them.

*NICHOLAS PETRELEY is a consultant and author in Kansas City, Mo. He can be reached at nicholas@petreley.com*

**Neovell:** So you don't need us. Is that your point, Councilor?

**Councilor IBM:** No, old men like me don't make points. We don't need a point, just lots of kung fu and special effects.

**Neovell:** Why don't you tell me what's on your mind, Councilor?

**Councilor IBM:** We want you to buy the commercial Linux company called SUSE. It's a great company. Indeed, if you knew SUSE like I know SUSE. . . .

**Neovell:** Why don't you buy your own commercial Linux?

**Councilor IBM:** Are you nuts? See those Linux distributions? I have absolutely no idea how they work. But I do understand the reason for them to work. They save us the trouble of building and maintaining our own operating systems, so we can make more money selling the hardware. Buying one of them would be more pointless than the plot of this movie.

We have it made — or at least we had it made until SCO started frightening our customers with its intellectual property lawsuits.

[Gratuitous kung fu fight scenes Nos. 16-25 follow, after which Neovell meets the Arcanetech.]

**Neovell:** Who are you?

**Arcanetech:** I am the Arcanetech, the power behind IBM. You have many questions. While your first question may be the most pertinent, it is also the most irrelevant.

**Neovell:** Why does Novell still exist?

**Arcanetech:** Actually, I was expecting you to ask what this movie is about. But since you asked, the reason Novell exists has nothing to do with the fact that its software design is nearly perfect. The inevitability of its doom is a consequence of choice.

Nearly 99% of all customers will accept the program, as long as they are given a choice, and that choice is manipulated by billions of marketing bucks. The question is whether or not they have a choice. But here's a better question. If NetWare is already losing market share hand over fist, why are people more likely to want NetWare now just because it runs on a Linux kernel?

**Neovell:** So this is about NetWare.

**Arcanetech:** No, it is about hardware.

**Neovell:** You mean hardware as in the many platforms supported by Linux?

**Arcanetech:** No, hardware as in our hardware sales. You are here because Linux is about to be destroyed. But if you own both Unix intellectual property and a Linux distribution, that all but guarantees Linux will be safe.

**Neovell:** Ah, so you do need us in order to survive.

**Arcanetech:** There are levels of survival we are prepared to accept. Which brings us at last to the moment of truth. There are three choices. The door to your right marked "I agree to purchase SUSE" leads to $50 million and an all-expenses-paid trip to Germany. The door to your left leads to continued irrelevance. You can choose one or the other, or you can choose what's behind door No. 3.

**Neovell:** I'll take door No. 1. If that trip to Germany turns out to be a stinker, I would hope that we don't meet again.

**Arcanetech:** We won't, at least not in this movie. The rest of the footage is kung fu fight scenes and special effects. ◗ 42908

## WANT OUR OPINION?

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# WHAT'S Wrong HERE?

JOB
SATISFACTION
SURVEY • 2003

The tepid economy has created a slow burn in the IT workforce. With a boatload of work to do, little training and a lack of confidence in their companies, today's IT workers are feeling overtaxed, disenfranchised — and boiling mad.
**By Thomas Hoffman**

IT WORKERS are getting a little hot under the collar. Last year's Job Satisfaction Survey showed that while a majority of managers and staffers wished for bigger raises and more advancement opportunities, they were grateful overall just to have jobs, given the weak economy.

This year, some of that cool stoicism has worn away. *Computerworld*'s 2003 Job Satisfaction Survey shows a workforce more vocal about its frustrations: Fifty-six percent of the 936 respondents said they are less satisfied with their companies than they were a year ago, and 55% said they're dissatisfied with their opportunities for advancement. Moreover, 69% of IT workers said they don't think they're working to their full potential, and 59% report being more stressed out than they were a year ago.

## Same All Over

It may be cold comfort to IT workers, but they're not alone in their dissatisfaction. According to a survey of 5,000 U.S. households that was published by The Conference Board Inc. in September, less than half of Americans are satisfied with their jobs — the highest level of career discontent since the New York-based research firm began conducting the survey in 1995.

"I think you could look at every job function in the U.S. and find the same thing," says Paul Klein, senior vice

## JOB SATISFACTION SURVEY • 2003

## About This Survey

In August 2003, for one week, **Computerworld** invited visitors on its Web site to take the Job Satisfaction Survey. The 936 respondents had titles ranging from CIO to help desk operator, were employed full or part time or as contractors, and represented a wide range of industries and company sizes.

The majority of respondents were men (757 vs. 174 women); five respondents didn't indicate gender. A majority (549) said they worked at IT user organizations, while 241 respondents said they were employed at technology vendor companies, 107 indicated that their place of employment was a consulting firm, 28 said they were IT contractors, and 20 didn't specify type of company.
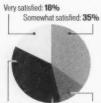
– *Mari Keefe, research manager*

**ONLINE EXCLUSIVE**
For access to the complete results of this survey, please visit our Web site:
QuickLink a3810
computerworld.com
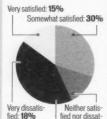
## JOB SATISFACTION

**Rate your overall satisfaction with your job.**

Very satisfied: **18%**
Somewhat satisfied: **35%**
Very dissatisfied: **11%**
Somewhat dissatisfied: **25%**
Neither satisfied nor dissatisfied: **11%**

**Rate your overall satisfaction with your company.**
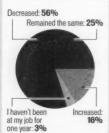
Very satisfied: **15%**
Somewhat satisfied: **30%**
Very dissatisfied: **18%**
Somewhat dissatisfied: **24%**
Neither satisfied nor dissatisfied: **13%**

**Has your overall level of satisfaction increased, decreased or stayed the same compared with one year ago?**

Decreased: **56%**
Remained the same: **25%**
I haven't been at my job for one year: **3%**
Increased: **16%**

**If you've been at your current job less than one year, has your level of satisfaction increased, decreased or stayed the same?**

Decreased: **42%**
Remained the same: **31%**
Increased: **27%**
Base: 253 respondents

*Note: The base for each question is 936 respondents, unless otherwise noted.*



"There's no way I'll get close to even 40% of the national average" compensation for an MIS director, says Jason D. Blevins, the MIS director at Manchester Tool & Die.

president and CIO at Rich Products Corp., a frozen foods manufacturer in Buffalo, N.Y. "Talk to accountants, HR managers and people in R&D, and you'll find similar reactions."

CIOs and other IT career experts say some of the discontent can be tied to the still-lingering effects of the dot-com boom, when many IT workers were showered with big bonuses and other perks. Now that cost-cutting is king and unemployment remains high, employers are the ones calling the shots.

But IT managers are feeling the impact, too, as Jason D. Blevins reports. Blevins is MIS director at Manchester Tool & Die Inc. in North Manchester, Ind., where he conservatively places his compensation at 20% of what an average U.S. MIS director takes in. "And there's no way I'll get close to even 40% of the national average," says Blevins. "But I'm not a city person, and I expect some pay drop working in the country."

Says Tim Monteith, CIO at Domino's Pizza LLC in Ann Arbor, Mich., "With the economy being tighter and IT [opportunities] not nearly as wide open as a few years ago, people in IT might feel more stressed and more trapped."

### Unwieldy Workload

Some IT workers say it's common for their employers to redistribute work among remaining staffers when co-workers leave voluntarily or are let go.

"A lot of companies — mine included — have been doing head-count reductions. Often, the work is migrated to two or three other people, and they tend to get overloaded," says Aaron Carr, an advanced business analyst at Cooper Tire & Rubber Co. in Auburn, Ind., who rates his own job satisfaction at 60 out of 100.

For his part, Carr says he'd like to become more involved in the business side of IT projects and less technology-focused. That's one of the reasons why he's pursuing an MBA at Indiana University in Fort Wayne. He says there are job opportunities within the IT department at Cooper Tire, but it's tough to move out of IT into one of the business units. "Once you're in IT, you're stuck in IT," Carr says.

Lance Lagro, a business technologist at Raytheon Co. in McKinney, Texas, is also looking for a job change. He says he would prefer to move to a more technology-focused job — from his current role as an SAP administrator to a database administrator.

When he has approached his managers with the idea, Lagro says he has been told there aren't any openings. "But when there are openings, they're hiring people with experience instead of giving me a chance," he says, citing two contract database administrators who have since been brought on full time at Raytheon.

Overall, Lagro says, his job satisfaction level "is pretty low. The only thing I like about it is that I'm on the edge of

# TOP 5

### FACTORS THAT WOULD PERSUADE YOU TO PURSUE ANOTHER JOB

1. Higher salary
2. Greater opportunity for training and enhancement of skills
3. Access to new and challenging technologies
4. Job security
5. Improved company and/or departmental leadership

### ATTRACTIONS OF YOUR CURRENT JOB

1. Access to new and challenging technologies
2. Opportunity for training and enhancement of skills
3. Salary
4. More challenging assignments
5. Better job security

### MOTIVATORS AT WORK

1. Challenging work
2. Recognition of efforts
3. Salary
4. Work/life balance
5. Responsibility

### FACTORS CONTRIBUTING TO JOB-RELATED STRESS

1. Heavy workload
2. Weak company and/or departmental leadership
3. Lack of a career path or career development
4. Company layoffs
5. Significant budget cuts within the company

### FACTORS THAT HAVE AFFECTED YOUR WORKING CONDITIONS

1. Budget cuts
2. Increased workloads (due to staff cuts)
3. Permanent staff layoffs
4. Salary freezes
5. Hiring freezes

### EXPECTATIONS FOR THE JOB MARKET

1. More work will be outsourced
2. Hiring freezes will continue
3. Salary freezes will continue
4. Bonus freezes will continue
5. Layoffs will continue

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the Dallas/Fort Worth area out in the country, which is where I want to live."

## The Learning Deficit

At some companies, training has been cut due to budget constraints. In other cases, IT workers say they have training opportunities but don't have time to attend classes. To fill short-term project resource demands, many companies are opting to hire contractors who have specific skills while market prices are low.

Jackie Fagan, vice president of human resources for corporate IT at Cendant Corp., says she agrees with *Computerworld*'s findings about the rise in dissatisfaction levels among technologists. In a recent survey at the New York-based provider of travel and real estate services, most in the IT department said they're happy working for the company, but they also said they'd like more career advancement and training opportunities, says Fagan.

Dissatisfaction could lead IT workers to jump ship once the economy rebounds. But at Cendant, at least for the time being, "we haven't had a lot of voluntary turnover," says Fagan. "There isn't a lot of work in the market."

While IT workers may be dissatisfied with their current jobs or companies, 77% of the respondents said they're still glad they pursued a career in IT.

"I'm one of the happy people. I always have new challenges when I come to work," notes Scott Grossweiler, a telecommunications specialist at Meriwest Credit Union in San Jose. Grossweiler, who has been in his current position for a year, acknowledges that there aren't a lot of opportunities for advancement at the credit union right now, but he says, "I'm happy with where I'm at and what I'm doing."

But given the rise in offshore outsourcing and the threat it poses to job security, some people are openly questioning their profession's future.
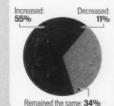
"Marketing and salespeople work 9-to-5 jobs — they don't have the stress levels we do, and they don't have to work weekends and holidays," says Eric Mortensen, a database administrator at Royal Appliance Manufacturing Co. in Cleveland. "I'd say half the IT people I talk to — both within my company and outside — are wondering whether there's a career opportunity for them outside of IT." ↻ 42359

## WHAT YOU CAN DO

These forward-thinking companies have taken steps to address career advancement and training issues for their IT workers. Read their strategies online:

**QuickLink 42360**
www.computerworld.com

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## COMPENSATION

**In the past year, has your base compensation . . .**

Increased: **55%**
Decreased: **11%**
Remained the same: **34%**

**Did you receive a bonus in the past year?**

No: **56%**
Yes: **43%**
Don't know: **1%**
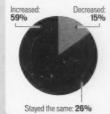
## STRESS LEVELS

**How stressful is your job?**

Very stressful: **26%**
Somewhat stressful: **56%**
Not at all stressful: **2%**
Not very stressful: **16%**
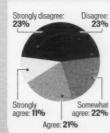
**Has your level of stress from your job increased, decreased or stayed the same compared with one year ago?**

Increased: **59%**
Decreased: **15%**
Stayed the same: **26%**
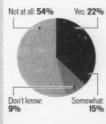
## JOB SECURITY

**Do you agree or disagree with this statement: "I have a strong sense of job security."**

Strongly disagree: **23%**
Disagree: **23%**
Strongly agree: **11%**
Somewhat agree: **22%**
Agree: **21%**

**Has your job security been impacted by H-1B visas or offshore outsourcing?**
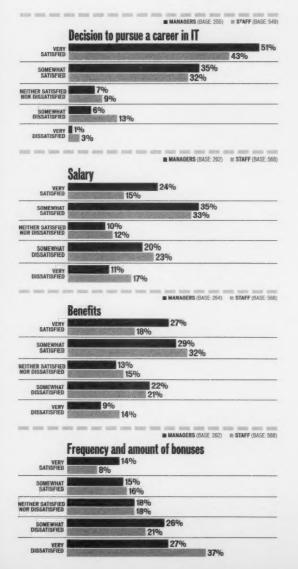
Not at all: **54%**
Yes: **22%**
Don't know: **9%**
Somewhat: **15%**

*Note: The base for each question is 936 respondents, unless otherwise noted.*

# JOB SATISFACTION SURVEY · 2003

## HOW SATISFIED ARE YOU?

We asked IT professionals responding to our survey to rate their level of satisfaction in the following areas. Manager and staff responses are broken out below.

■ **MANAGERS** (BASE: 255)    ▦ **STAFF** (BASE: 549)

### Decision to pursue a career in IT

| | |
|---|---|
| VERY SATISFIED | 51% / 43% |
| SOMEWHAT SATISFIED | 35% / 32% |
| NEITHER SATISFIED NOR DISSATISFIED | 7% / 9% |
| SOMEWHAT DISSATISFIED | 6% / 13% |
| VERY DISSATISFIED | 1% / 3% |

■ **MANAGERS** (BASE: 262)    ▦ **STAFF** (BASE: 568)

### Salary

| | |
|---|---|
| VERY SATISFIED | 24% / 15% |
| SOMEWHAT SATISFIED | 35% / 33% |
| NEITHER SATISFIED NOR DISSATISFIED | 10% / 12% |
| SOMEWHAT DISSATISFIED | 20% / 23% |
| VERY DISSATISFIED | 11% / 17% |

■ **MANAGERS** (BASE: 264)    ▦ **STAFF** (BASE: 568)

### Benefits

| | |
|---|---|
| VERY SATISFIED | 27% / 18% |
| SOMEWHAT SATISFIED | 29% / 32% |
| NEITHER SATISFIED NOR DISSATISFIED | 13% / 15% |
| SOMEWHAT DISSATISFIED | 22% / 21% |
| VERY DISSATISFIED | 9% / 14% |

■ **MANAGERS** (BASE: 262)    ▦ **STAFF** (BASE: 568)

### Frequency and amount of bonuses

| | |
|---|---|
| VERY SATISFIED | 14% / 8% |
| SOMEWHAT SATISFIED | 15% / 16% |
| NEITHER SATISFIED NOR DISSATISFIED | 18% / 18% |
| SOMEWHAT DISSATISFIED | 26% / 21% |
| VERY DISSATISFIED | 27% / 37% |

# Can This RELATIONSHIP Be Saved?

**Senior managers feel stretched thin. IT workers feel they're not being heard. What will it take to restore these lines of communication? Here's what some say can be done. By Steve Ulfelder**

**W**ITH THEIR SKILLS moldering and their influence waning, many of the IT workers who responded to our job satisfaction survey say they are feeling shut out and place the blame squarely at their managers' feet. But with every round of layoffs, those managers are saddled with more direct reports and bigger budget headaches. They spend so much time fighting fires, in fact, that they have precious little left for coaching, advocacy and other managerial duties.

Meanwhile, hovering in the background — never far from IT professionals' minds — is the possibility that some of the technology workforce will be replaced by offshore outsourcing. According to some sources, communication from senior management decreases as outsourcing increases.

What will it take to restore the lines of communication? Interviews with individual contributors and managers indicate the problem is a deep, protracted one — but there are small steps that can be taken to improve the situation now.

**MANAGERS**   **GET CREATIVE, CHEAPLY.** "Our budget is tight, and we have to learn how to make do with what we have," says Julius May, a database administrator for the state of Washington. Employees there have gone without raises for the past two years — and increases aren't on the horizon, says May.

He says managers could ease the pain if they did more to pass along kudos. "They accept all praise that's sent their way but fail to recognize the employees that provide the services," May says.

According to Maria Schafer, an analyst at Meta Group Inc. in Stamford, Conn., managers can do a lot to counteract flat salaries and boost morale — if they're resourceful.

"If you're stuck with no budget for incentives, you've got to be creative," Schafer says. "You can start an [IT] employee newsletter; you can offer vouchers and other noncash awards. These things aren't enough, but even a token of recognition helps."

**STAFF**   **LOOK AT THE BIG PICTURE.** Of course, even managers have managers. Many middle-management IT professionals who responded to our survey understand their direct reports' resentment but have adopted a "What can you do?" attitude, because it's obvious that their bosses are struggling just as they are.

That's how one network manager at an East Coast satellite office feels. Though his employer, a California-based retailer, is prospering, senior management has refused to expand his three-member support staff. The staff includes just one dedicated help desk member — and 320 users. "I've been pleading my case every year for three years," says the manager, who asked that neither he nor his company be

WebSphere software
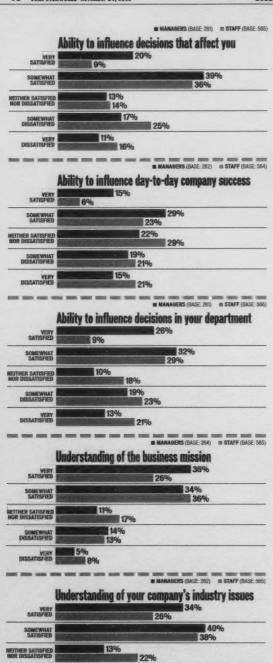
See information organized.
See access personalized.
See service recognized.

Can you see it?

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■ MANAGERS (BASE: 261)    ■ STAFF (BASE: 565)

## Ability to influence decisions that affect you

| | |
|---|---|
| VERY SATISFIED | 20% / 9% |
| SOMEWHAT SATISFIED | 39% / 36% |
| NEITHER SATISFIED NOR DISSATISFIED | 13% / 14% |
| SOMEWHAT DISSATISFIED | 17% / 25% |
| VERY DISSATISFIED | 11% / 16% |

■ MANAGERS (BASE: 262)    ■ STAFF (BASE: 564)

## Ability to influence day-to-day company success

| | |
|---|---|
| VERY SATISFIED | 15% / 6% |
| SOMEWHAT SATISFIED | 29% / 23% |
| NEITHER SATISFIED NOR DISSATISFIED | 22% / 29% |
| SOMEWHAT DISSATISFIED | 19% / 21% |
| VERY DISSATISFIED | 15% / 21% |

■ MANAGERS (BASE: 261)    ■ STAFF (BASE: 566)

## Ability to influence decisions in your department

| | |
|---|---|
| VERY SATISFIED | 26% / 9% |
| SOMEWHAT SATISFIED | 32% / 29% |
| NEITHER SATISFIED NOR DISSATISFIED | 10% / 18% |
| SOMEWHAT DISSATISFIED | 19% / 23% |
| VERY DISSATISFIED | 13% / 21% |

■ MANAGERS (BASE: 264)    ■ STAFF (BASE: 565)

## Understanding of the business mission

| | |
|---|---|
| VERY SATISFIED | 36% / 26% |
| SOMEWHAT SATISFIED | 34% / 36% |
| NEITHER SATISFIED NOR DISSATISFIED | 11% / 17% |
| SOMEWHAT DISSATISFIED | 14% / 13% |
| VERY DISSATISFIED | 5% / 8% |

■ MANAGERS (BASE: 262)    ■ STAFF (BASE: 565)

## Understanding of your company's industry issues

| | |
|---|---|
| VERY SATISFIED | 34% / 26% |
| SOMEWHAT SATISFIED | 40% / 38% |
| NEITHER SATISFIED NOR DISSATISFIED | 13% / 22% |
| SOMEWHAT DISSATISFIED | 9% / 11% |
| VERY DISSATISFIED | 4% / 3% |



"Our budget is tight, and we have to learn how to make do with what we have," says Julius May, a database administrator for the state of Washington.

named. Each fall, his request for more staffers is denied. "The rationale is that there's no money in the budget," he says. That preposterous ratio means the manager spends a great deal of time supporting end users himself. He doesn't get to coach, train or manage his direct reports as much as he'd like, and as a result, turnover is high.

So this manager is hardly surprised that his boss, the IT director, isn't effective these days: "He's overburdened; he has more direct reports than anyone else in the company."

**MANAGERS & STAFF**

**MAKE COMMUNICATION A PRIORITY AGAIN.** It would be a gross over-simplification to say that the rancor in the IT profession could be solved in a jiffy through better communication. But it's reasonable to note two related items: First, many survey respondents say that communication from senior management took a serious turn for the worse two to three years ago, when the economic slump settled in and offshore outsourcing grew in popularity. Second, improving communication flow is one fix IT organizations can make cheaply.

"Often, the things that are easiest to do seem to be the last things companies tackle," Schafer says. "We're talking fundamental communication."

An Oracle database administrator at a Midwestern financial services firm offers a telling example. He says that a few years ago, when the company launched a pilot offshore outsourcing project, "the [IT] director was talking openly about it," and as a result, there was little complaint from workers who understood the need to cut costs. But that director has been replaced, and the communication has vanished, says the IT administrator, who requested anonymity. "I don't hear anything from this [new] guy. Nothing about the ratio of employees to outsourced jobs, no statistics, nothing."

Resentment, suspicion and confusion now reign among the rank and file. "Eighteen months ago, I was told I'd be cross-trained in UDB [DB2 Universal Database, IBM's relational database management system]. Instead, they're training two of the [outsourcers'] consultants on it," he says.

Managers seeking to rebuild trust among their IT employees have their work cut out for them; outsourcing, layoffs and tight budgets have created ill will that verges on bitterness.

Perhaps one database administrator in the Midwest best exemplifies the prevailing attitude: "It's hard, when you have a family, to go from making $80,000 or $90,000 a year to making $40,000 a year — and worrying because there's some offshore guy who's making half of that." ○ **42357**

*Ulfelder is a freelance technology and business writer. Contact him at sulfelder@charter.net.*

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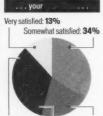
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# JOB SATISFACTION SURVEY • 2003

## Please rate your satisfaction with . . .

### . . . your . . .

Very satisfied: **13%**
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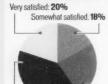
Very dissatisfied: **9%**
Somewhat dissatisfied: **25%**
Neither satisfied nor dissatisfied: **19%**

### . . . the flexibility of your

Very satisfied: **42%**
Somewhat satisfied: **30%**

Very dissatisfied: **5%**
Somewhat dissatisfied: **11%**
Neither satisfied nor dissatisfied: **12%**

### . . . and your options.

Very satisfied: **20%**
Somewhat satisfied: **18%**

Very dissatisfied: **21%**
Somewhat dissatisfied: **18%**
Neither satisfied nor dissatisfied: **23%**

*Note: The base for each question is 936 respondents.*

## JOB SATISFACTION:

# It's Highly Overrated

**F**ew managers are genuinely surprised when the results of an employee satisfaction survey are revealed. You really don't need the science of statistics to know that people aren't entirely pleased with every aspect of their work lives.

Given the state of our industry over the past few years, most IT managers are facing at least some degree of worker disaffection. In fact, plenty of the managers themselves are similarly discontent, as *Computerworld*'s Job Satisfaction Survey also shows.

But once faced with a dissatisfied IT workforce, what should you do? Hide in your office? Fire the most disgruntled people? Pretend it isn't happening?

Before making any decisions, let's ask an important question: How important is job satisfaction anyway?

Of course, good leaders want their people to be reasonably happy, but how important is it, really, that they be satisfied? This may sound a bit callous, but I've never been particularly captivated by the idea of managers making job satisfaction a high-priority goal. I have a few reasons for my skepticism:

**1. I'm not sure it's possible to satisfy people.** Complete satisfaction just isn't part of the human condition. We are a restless and ambitious species.

**2. I'm not sure it's desirable to satisfy people.** Satisfaction doesn't guarantee productivity. In fact, it probably does just the opposite. Nor does satisfaction spark creativity. There's a reason why the old saying goes, "Necessity is the mother of invention," rather than,

"Abundance is the mother of invention." I've also never heard people suggest that big paychecks and job security were the source of their group's outstanding performance.

**3. The range of things we measure to gauge job satisfaction distracts from what's really important and distorts the true state of our organizations.** I've observed that there are a few things that are critical for technical people's happiness: cool work, fair pay, good relationships and a reasonable belief that the future holds more of the same. Most of the things we measure are important only if these primary things are missing, in which case there's already a problem.

OPINION: **PAUL GLEN**

So, what should you do about a dissatisfied workforce? From the rants above, you might think that my answer would be that you should do nothing, but that's not exactly the case. It's not that workers' dissatisfaction is unimportant, but alleviating it shouldn't be your primary focus.

I suggest that you look instead at their motivation, which I believe has much more of a direct impact on what they can achieve than their satisfaction does and is also much more important for your collective success. People who are motivated are focused on their work more than on their personal sat-

isfaction. Motivated teams can operate at many levels of job satisfaction. Motivation can also be a great source of job satisfaction.

So, given all the budgetary constraints that most of us work under today, what can you do to help motivate your staff? Here are a couple of simple suggestions that don't cost much.

First, select wisely. This is the most important thing you can do to ensure that you've got highly motivated project teams. If you want to have a motivated team, pick people to be on the team who are motivated to be on it. Take a minute to think about that, because when most of us are assigning people to projects, we do a quick assessment based on all the wrong questions. Usually managers choose based on who's available, who's got the skills and who's done something just like this before.

They're all good criteria, but none of them is likely to ensure that you've got a motivated team. Try looking also at who wants to be on this project; who wants to learn a new technology, business or project role; and who would want to work with the people who have already been selected for the team.

Second, engage the staff in improving its own motivation. No matter how busy everyone is, you should be able to carve out just a little time to encourage discussions about what would improve conditions. Try taking small groups of staffers to lunch once a week to discuss their perspectives on how things are going. At worst, they'll know that you're interested in their concerns and points of view. You'll also get the chance to explain the constraints of the situation. At best, you'll get some great ideas that can be implemented to actually make a difference and improve satisfaction, motivation and productivity.

When faced with a disaffected workforce, remember that the opposite of dissatisfaction isn't satisfaction, but motivation. If you want your employees to be productive, engaged, excited about coming to work and likely to stick around when job prospects improve, spend more time thinking about how to motivate them rather than how to satisfy them. ✪ **42356**

*Glen is an IT management consultant in Los Angeles and the author of* Leading Geeks: How to Manage and Lead the People Who Deliver Technology *(Jossey-Bass Pfeiffer, 2003). He can be reached at info@c2-consulting.com.*

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TECHNICAL SERVICES MANAGER to direct and coordinate the organization's IT product and service activities in conjunction with the marketing activities; Study and analyze business processes of client companies to recommend business process strategies for optimizing efficiency; Establish work plan and staffing need for business process re-engineering and software development projects and arrange for technical recruiting and assignment of project personnel; Confer with project staff to outline work plan and assign duties and responsibilities; Confer with project personnel to provide technical advice and resolve problems utilizing technical background in business process re-engineering; Interface with customer during the pre- and post-sale phases to ensure expectations are met on time and within budgets; Review analysis of activities, cost operations and forecast data using knowledge of finance to determine department's progress towards stated goals and objectives. Require: Master's degree in Computer Science, Business Admin., or a closely related field with 2 yrs of exp in the job offered or as a Project Manager. Competitive salary offered. Apply by resume to: Sridhar Marupudi, Orpine Enterprises, LLC, 1004 Crooked Creek Court, Mableton, GA 30126; Attn: Job RG.

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Programmer Analyst needed for IT consulting firm located in S. Burlington, Vermont. Job duties include: Analyze, design, develop, code and implement computer software applications/systems using Forte and Oracle RDBMS in both Windows and UNIX environments. Applicant must have B.S. degree in Computer Science, Business, Mathematics or Engineering. Applicant must also have 2 yrs. exp. in the job duties described above or in any computer related occupation which includes the skills listed above. 40hrs/wk, 8:00 am-5:00 pm, Mon-Fri, $62,000.00/yr. Send resume & cover letter to Job No. 607935, Vermont Dept. of Employment & Training, P.O. Box 488, Montpelier, VT 05601-0488.

Full-time Senior Programmer Analyst: Responsible for creating organized & uniform detailed programming specifications. Create flow charts, screen layouts, report layouts, record layouts, change instructions & test scripts used to evaluate production readiness of applications prior to promotion to production. Ensure efficient organization & deployment of applications solutions addressing assigned projects; develop & maintain Notes application. Create, design & implement all programs related to any application change or development requests. Create design specifications & formulate implementation plan using Lotus Notes/Domino R 5.0x, Lotus Notes R 4.6, Lotus Script, Lotus Formula, LEI, JavaScript, Java, XML, HTML, DHTML, CSS, ODBC, Db2, Adobe Photoshop. Must have 4 yrs. exp. in job offered or position with same duties. Salary competitive. Send resume to Meghan Cass, Mohawk Industries, P.O. Box 1448, 431 South Green St., Dalton, GA 30722.

Programmer Analyst needed for IT consulting firm located in Burlington, VT. Job duties include: Analyze, design, develop, & implement computer applications & systems using SAP for clients located throughout the eastern U.S. Work with production planning, materials management, & engineering change modules. Configure & customize modules for specific applications. Involved in system integration, systems configuration, program specification, coding, testing & unit integration. Use ABAP for programming. Also use APO for its ERP applications. Applicant must have B.S. degree in Comp. Sci., Business, Math or Engineering. Applicant must also have 2 yrs. exp. in the job duties described above or in any computer related occupation. 2 yrs. exp. must include 2 yrs. w/SAP, ABAP & multiple modules w/min. 1 yr w/APO. 40hrs/wk, 9:00 am-5:00 pm, M-F, $65,000.00/yr. Send resume & cover letter to Job No. 607996, VT Dept. of Employment & Training, P.O. Box 488, Montpelier, VT 05601-0488.

Client/Server Analyst: Louisville, KY: Designs, implements and supports two-tier and three-tier client/server infrastructure in a multi-server WAN/LAN environment with NT and Netware server support at the O/S level. Requires a Bachelor's degree and at least one year of experience in the above. Reply with resume to: IT Job, P.O. Box 6351, Louisville, KY 40206-0351.

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# Comdex

tems Inc., top vendors serving the corporate IT market had only a peripheral presence or were absent altogether.

Jai Agrawal, senior project manager for enterprise applications and information services at Boeing Satellite Systems Inc. in Los Angeles, said the smaller show's lack of key vendors such as Oracle Corp. meant that part of his mission — identifying new technologies and learning how they might be adapted and integrated within his company — couldn't be accomplished.

"Typically, the big players are innovators," Agrawal said. "They bring out the newest and greatest stuff. If they're not here, then they know better than we do not to come. Next year, I don't think I will come back."

James Blaine, a United Auto Workers International union representative assigned to the information systems department at UAW-General Motors in Detroit and a five-time Comdex attendee, also expressed dissatisfaction with the show. "This used to be a one-stop shop" for information on technologies such as Linux, he said.

In past years, a multivendor Linux exhibit was housed in the nearby Sands Expo and Convention Center. But this year, the Sands isn't being used for exhibit space. "I can't get it all here anymore," Blaine said.

> ## I don't think I can bear to see another computer [cooling] fan.
>
> **BARTON RICKETTS,**
> CEDARS-SINAI MEDICAL CENTER

Blaine said he's undecided about whether he will return in the future. "It depends on what we need to get done at that time," he said. "I think I'd probably spend more time on the Internet [searching for relevant information] before coming back here."

Barton Ricketts, a certified network engineer at Cedars-Sinai Medical Center in Beverly Hills, Calif., and a longtime Comdex attendee, said he came to the show this year to get information on deploying tablet PCs within the hospital to replace handheld devices.

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Ricketts said he was able to find some products from Acer America Corp. and Fujitsu Computer Systems Corp., but he was disappointed that other vendors were absent on what has become a shrinking show floor. "The big companies aren't here," he said. "I told my wife, 'Next year [Comdex] will probably be in a hotel room.'"

Some attendees complained that too many exhibitors were hawking consumer electronics and that many vendors from China, Taiwan and South Korea were selling niche components such as batteries and cooling fans. That was the norm at Comdex in past years, but it wasn't what attendees who were attracted by the promise of a corporate IT focus expected to see.

## Unpleasant Surprise

"I don't think I can bear to see another computer [cooling] fan," said Malachy Smith of DNM Technology Ltd., a software and services company in Dublin. He and a colleague traveled from Ireland because they had heard about the show's renewed focus on the


COMDEX attendees found a dearth of large vendors exhibiting.

enterprise. They both said they had wanted to see less hardware and more software. "We went to see [Sun Microsystems Inc. CEO] Scott McNealy's keynote, and afterwards, we thought we'd go and look at Sun's booth on the show floor," said David Quirke, DNM's IT services director. "We got there and — surprise! — they don't have a booth."

Eric Faurot, vice president and general manager of Comdex at San Francisco-based MediaLive, acknowledged some of the shortcomings. But he reiterated his company's belief that this first smaller Comdex is laying the foundation for an improved event. "This is essentially a launch show for us" that follows the bankruptcy earlier this year of the show's former owner, Key3Media, he said. Organizers said the show drew over 50,000 attendees.

Not everyone, though, thinks the event is waning. Paul Smigel, a consulting network engineer for the communications division at St. Louis-based wire and cable vendor Belden Inc., said he found information here on several technologies he came to investigate, including a means of giving Universal Serial Bus device access to anyone on his network.

The show still has value, he said, though he agreed with critics that it needs to attract more top vendors. Smigel said he was particularly disappointed that Novell Inc. was absent, because he's interested in the technology mix stemming from Novell's recent acquisition of SUSE Linux AG. "I want to put my fingers in it and play with it," he said.

Paul Kraska, product marketing manager at Multi-Tech Systems Inc., a Mounds View, Minn.-based vendor of virtual private networks and voice-over-IP technology, said his booth was busy at the show, providing evidence that Comdex is still worthwhile for corporate IT. "If vendors weren't here, they made a mistake," Kraska said. "It makes me feel good that we saw the potential." 43033

*James Niccolai of the IDG News Service contributed to this story.*

## Crosstown Show Blames Comdex for Poor Showing

**LAS VEGAS**

With the annual Comdex/Fall IT show on the ropes this year, the organizers of upstart competitor Computer Digital Expo (CD Expo) hoped to deliver a few debilitating punches. But Comdex's pain isn't CD Expo's gain.

The event, sponsored by New York-based Jupitermedia Corp., was held in the Mandalay Bay Convention Center just a couple of miles from the Comdex venue. Show organizers said there were about 3,300 attendees by the end of the second day, with about 7,500 expected over its four-day run.

That was just fine with Alan Meckler, CEO of Jupitermedia. "We've got our toehold," he said. And somewhat paradoxically, Meckler said, his competition's weakness cost him. Meckler said he expected to attract 10%

to 15% of Comdex attendees to his show and blamed low attendance figures on smaller-than-expected crowds at Comdex. "That hurt me," he said.

For example, at CD Expo, a keynote speech by The SCO Group Inc. CEO and President Darl McBride drew about only 80 people. About 28 IT vendors exhibited on the small show floor, and some of them made no effort to hide their disappointment. At least one exhibitor pulled out before the show ended on Thursday.

An executive at Siemens Enterprise Networks Inc. who spoke on condition of anonymity confirmed that the company sent its booth staff home Tuesday night and removed its equipment from the CD Expo floor on Wednesday. "It's just a matter of always having to continually

monitor the value of participation" at trade shows, the executive said. "In this case, the ROI wasn't there."

"We staff our booth with highly skilled professionals who have a lot of other responsibilities," he said. And when an event isn't yielding results, shifts in priorities are made, he explained. Siemens Enterprise Networks is a division of Siemens Information and Communication Networks Inc. in Boca Raton, Fla.

Siemens was by no means alone with unfulfilled expectations. "It's much smaller than I anticipated," said a vendor rep who asked that his name and his company's be withheld. Another vendor rep who also requested anonymity said his company felt that show organizers had overplayed the potential crowd.

*– Todd R. Weiss*

FRANK HAYES ▪ FRANKLY SPEAKING

# Who Will SCO Sue?

THINGS AREN'T GOING WELL for The SCO Group these days. Business is down. Those Unix licenses SCO is trying to sell to Linux users just aren't moving. SCO's lawsuit against IBM is running into trouble. So is SCO's defense in the lawsuit Red Hat has filed against it. In and out of the courtroom, SCO is getting beaten up on every side.

So what did SCO do last week to fight back? It announced that it's paying its lawyers with SCO Group stock.

And that, by mid-February, those lawyers will sue some large corporate Linux user.

Who will SCO sue? SCO won't say; that's for the lawyers to decide. But it will be one of the 1,500 companies that got a nasty letter from SCO back in May, complaining about the fact that those companies used Linux — someone who, in the words of SCO lawyer David Boies, "will illustrate the nature of the problem." Some help, huh?

If this all sounds a bit, er, *unusual* — yes, it is.

Paying most of your legal bills with company stock is certainly unusual. Even Boies says so. But at a practical level, here's how it works: When the lawyers make legal threats, SCO's stock price tends to go up. If they lose, of course, the stock price will collapse — and, in effect, they won't get paid. So it's now in the lawyers' interest to keep that stock price jacked up however they can.

And that translates into some luckless corporate Linux user getting sued.

That's a bit unusual, too. After all, SCO is already in court with two separate lawsuits in which the company will have to prove that its copyrights were violated in Linux. Ordinarily, you'd expect SCO's strategy to be to win those cases first; after that, going after corporate Linux users would be much easier to do.

But those cases aren't looking good. In the IBM suit in Utah, IBM's lawyers have told the judge that SCO has refused to turn over documents and answer questions. SCO is required to do this as part of the pretrial discovery process.

Theoretically, this failure could cost SCO the case, though that's not likely. But judges don't like plaintiffs who do this — especially when part of what SCO has failed to turn over

is an explanation of exactly what IBM is supposed to have done wrong. That sort of delay makes it look as if SCO is stalling.

Meanwhile, in the Red Hat case in Delaware, after a series of missteps, SCO wants to stall the entire case for several years. SCO's new lawyers there have asked the judge to postpone pretrial discovery in the Red Hat case until after the IBM case is finished in Utah, so SCO won't have to argue two cases at once. Failing that, SCO wants the Red Hat case moved to Utah.

Wait, you may be saying. SCO doesn't want to do discovery on two cases at once? Then why is SCO in such a rush to sue a corporate Linux user, which will require SCO to cough up much of the same information that SCO has so far refused to deliver in the IBM and Red Hat cases?

They don't want that, of course. Which means we know just who SCO is likely to sue.

We know it will be one of the 1,500 companies that got that nastygram from SCO in May.

We know it will be a company that does business in Utah, since SCO plans to file suit there. We know it will be a company that hasn't upgraded to the most recent versions of Linux, since SCO specifically claims that Linux 2.4 is chock-full of stolen code.

Mainly, though, we know it will be a company in financial or legal trouble already. One that can ill afford a lawsuit just now. One that SCO's lawyers believe will fold instead of fight.

Because with SCO already getting beaten up on every side, the last thing the company wants is a real fight. So when SCO picks on a corporate user, it will go after the lamest 98-pound weakling it can find. ◑ 42990

**FRANK HAYES,** *Computerworld's* senior news columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

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